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1. Wallentin L, et al. N Engl J Med. 2009;361:1045-1057.

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References:
1. Klinger M, Arias M, Vargemezis V, et al, on behalf of the AMICUS Study Investigators. *Am J Kidney Dis.* 2007;50:989-1000. 2. Macdougall IC, Walker R, Provenzano R, et al, on behalf of the ARCTOS Study Investigators. *Clin J Am Soc Nephrol.* 2008;3:337-347. 3. Data on file. MIRCERA® (RO0503821) Roche Clinical Study Report - Protocol NH20052 - Research Report 1036267. 4. Roger SD, on behalf of the CORDATUS Study Investigators. Poster presented at the XLVII ERA-EDTA Congress, Munich, Germany. 25-28 June 2010. Abstract Sa535.

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MTMAY [illegible]1001

Early antiretroviral treatment cuts HIV transmission

A US trial suggests that ARVs not only treat HIV infection, they also reduce transmission rates.

Rajesh Kumar

People infected with human immunodeficiency virus (HIV) are 96 percent less likely to transmit the disease to their healthy partners if they start taking antiretroviral drugs (ARVs) early, according to a study hailed as a scientific breakthrough of 2011.

The findings end a long-standing debate over whether ARVs can provide a double benefit by treating the virus in individual patients while simultaneously cutting transmission rates, said researchers from the University of North Carolina's school of medicine in Chapel Hill, North Carolina, US. [*N Engl J Med* 2011; 365:493-505]

The HPTN* 052 study enrolled 1,763 heterosexual couples in 2007 from Brazil, India, Thailand, the US, Botswana, Kenya, Malawi, South Africa and Zimbabwe. Each participating couple included one HIV-positive partner.

Half of the HIV-positive individuals were put on ARVs immediately while the other half were made to wait until their CD4 counts fell below 250 — indicative of severe immune damage — before

offering treatment to see if this made any difference in HIV transmission to healthy partners or to HIV-related clinical events in HIV-positive group.

In early 2011, 39 HIV transmissions to healthy partners were observed (incidence rate, 1.2 per 100 person-years; 95% confidence interval [CI], 0.9 to 1.7), of which 28 were virologically linked to the infected partner (incidence rate, 0.9 per 100 person-years, 95% CI, 0.6 to 1.3). Of the 28 linked transmissions, only one occurred in the early-therapy group (hazard ratio, 0.04; 95% CI, 0.01 to 0.27; $P<0.001$).

Also, 105 participants had at least one HIV-related clinical event: 40 of them in the early-therapy group and 65 in the delayed-therapy group, a reduction of nearly 40 percent. Extra-pulmonary tuberculosis dominated the clinical events, with three cases in the early therapy group versus 17 cases in the other.

Seeing these results, an independent monitoring board decided all study participants should be given ARVs 4 years before the study's closure. The board also recommended that the trial's findings be made public as soon as possible.

Professor Roy Chan, head of Singapore's national sexually transmitted infections control program, called it "an important study for Asia and the rest of the world" due to its significance for the war on HIV/AIDS.

Treatment with ARVs is already known to reduce the viral load in an infected individual. Many HIV/AIDS researchers had reasoned that treated individuals should also be less infectious. But skeptics contended that such a theory was unproven and that the viral load might not reflect levels of virus in genital secretions.

The new study's findings help promote ongoing treatment of HIV to reduce viral loads in communities and could possibly eliminate HIV/AIDS epidemics in some countries, said the researchers.

But ARV therapy is by no means a magic bullet for controlling or ending the HIV epidemic, said Dr. Scott Hammer from the division of infectious diseases at Columbia University Medical Center, New York–Presbyterian Hospital, New York, US, in an accompanying editorial. [*N Engl J Med* 2011; 365:561-562]

Adverse events, emergence of drug-resistant viral strains, maintenance of adherence, sustainability, and cost are just some of the concerns, said Hammer.

"However, this is precisely the wrong time to limit access to antiretroviral therapy in resource-limited settings, since we have the tools in hand to maintain or restore health in infected persons and reduce transmission to their sexual partners," he said.

Dr. James D. Shelton of the US Agency for International Development (USAID)'s bureau for global health, in another comment, said ARV resistance mutations are already found in untreated patients and providing ARVs on a more massive scale for many years opens the doors for more resistance, especially when use would be long and adherence possibly lower. [*Science* 2011; 334:1645-1646]

ARVs as prevention must not jeopardize already precariously low funding for complementary prevention interventions such as male circumcision, condoms and behavior change, said Shelton. MT

** HPTN: HIV Prevention Trials Network*

Protecting our children from HIV

Dr. Annette Sohn, Director, TREAT Asia (Therapeutics Research, Education and AIDS Training in Asia), The Foundation for AIDS Research, Bangkok, Thailand.

World AIDS Day is a day of remembrance, and 2011 was more somber and less hopeful than I would have predicted.

Although the latest progress report on the global HIV/AIDS response shows that the incidence of HIV continues to decline and fewer people are dying from AIDS-related causes, new money for the cause is drying up.

Following the recent cancellation of the 11th funding round by the Global Fund to fight AIDS, Tuberculosis and Malaria due to a lack of donor country support, children living with HIV across Asia and Africa will be amongst those hardest hit as support for prevention of mother-to-child HIV transmission programs and pediatric drug formulations will be rationed even further.

The fund is one of the largest financial supporters of programs offering education, support and treatment to those living with HIV and AIDS. However, underfunding has led to the replacement of round 11 with a transitional funding mechanism to provide just enough for the continuation of "essential" prevention, treatment and care services of the three diseases.

There are critical programs around the world that were relying on the opportunity to apply for round 11 funding. Without the opportunity to apply to round 11, critical HIV programs around the world will be forced to make painful choices to sacrifice activities or close their doors. The overall consequence will be to end access to life-saving treatment for some of the poorest among us. After achieving so much as a global community to improve HIV treatment coverage, prevention, education, and community mobilization, funding cuts pose a real risk of taking us back to a disastrous situation.

We do need to become more strategic in our investments and more efficient in how we implement programs, but this is the wrong time to slow down.

Asian children and HIV

The pediatric HIV epidemic in Asia faces new challenges that are in some sense a consequence of having earlier access to antiretroviral drugs. Children born with HIV in places like Thailand were given treatment early on in the epidemic, before we had potent triple-drug regimens. This kept them

alive, but has led to fewer options to manage their increasingly resistant HIV virus.

Being born with HIV infection affects the immune and other organ systems of the body differently from someone who acquires infection as an adult. The consequences of this are apparently early on in life in terms of brain development and later in life in terms of bone and cardiovascular toxicities. We do not fully appreciate what it means to grow up with HIV and have to deal with the virus for a lifetime.

We now have a growing cohort of older adolescents. Within the TREAT Asia cohort (a network of pediatric clinical sites in low to middle income countries in SE Asia and India), about 40 percent of the children are already 12 years or older. These HIV-positive adolescents, who have had the virus all their lives, present a range of clinical management challenges. At a time when they are growing up, trying to explore the world and find a way for themselves within it, they are also dealing with HIV and related health problems, medication adherence, drug resistance, and frequently doing this as orphans.

Better diagnosis needed

We also need to better identify the children who have HIV infection, because we don't really know the true incidence of HIV among children in Asia. That our prevention of mother-to-child transmission program coverage is worse than sub-Saharan Africa should be a cause for shame among the countries of the region, and too few infants can access the PCR testing needed to diagnose HIV.

Children do not know whether they have HIV or not. They cannot complain. They rely on adults around them to take care of them, to diagnose their illnesses. If we are able to diagnose them early on and start them on antiretroviral drugs, they will survive and hope to live to adulthood.

As we watch HIV funding shrinking more and more, I wonder how it is that we are able to spend so much on "saving" questionable elements of our financial systems and so little on saving the lives of our world's children. MT

Mother-child HIV transmission can be reduced

Antiretroviral drugs may prevent mother-to-child HIV transmission by about 50 percent if they are administered within the first 6 months of life or until breastfeeding stops.

South African researchers administered the antiretroviral drug nevirapine once daily to 1,527 infants at risk for HIV transmission for 6 weeks, as is standard practice. Infants were randomized to continue receiving nevirapine or a placebo for up to 6 months or until they stopped breastfeeding. [*Lancet* 2011. DOI:10.1016/S0140-6736(11)61653-X]

The trial showed that 1.1 percent of infants randomized to receive nevirapine became HIV-positive between the ages of 6 weeks and 6 months compared with 2.4 percent of those receiving placebo — a 54 percent transmission reduction. Mortality was comparable between the two groups, 1.2 percent in the nevirapine group and 1.1 percent in the placebo group, as was the frequency of adverse events. MT

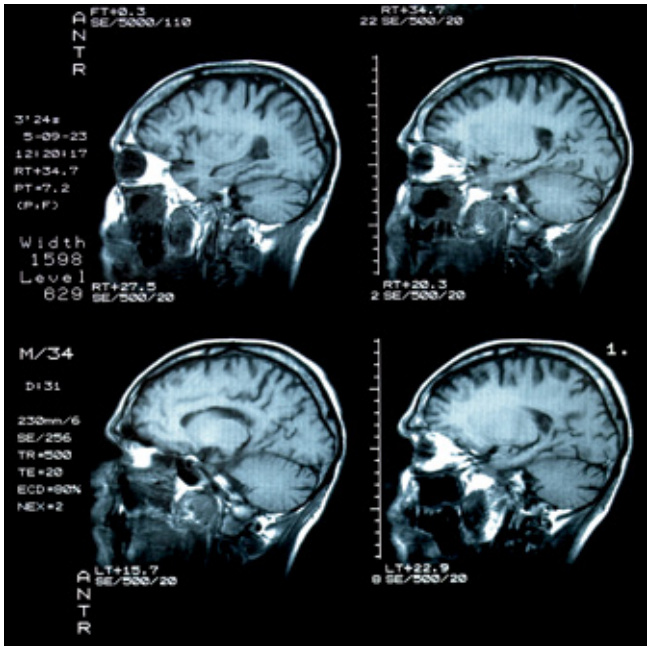
Brain MRI spots dyslexia early in childhood

Magnetic resonance imaging (MRI) scans can be used to detect dyslexia in children even before they begin learning to read, shows a US study.

Researchers at the Children's Hospital Boston, Massachusetts, found that MRI scans of children at risk of dyslexia displayed significant differences in brain activity compared to their non-dyslexic counterparts. The findings appear in the online edition of the *Proceedings of the National Academy of Sciences*.

"We already know that older children and adults with dyslexia have dysfunction in the same brain regions," said senior investigator, Dr. Nadine Gaab. "What this study tells us is that the brain's ability to process language sounds is deficient even before children have reading instruction.

"Families often know that their child has dyslexia as early as kindergarten,



but they can't get interventions at their schools," she said. "If we can show that we can identify these kids early, schools may be encouraged to develop programs." MI

Simple blood test for Alzheimer's in the pipeline

A fast, non-invasive and low-cost technique for detecting Alzheimer's disease could be in the works, a report from Spain says.

Researchers at Instituto de Estructura de la Materia in Madrid, led by Dr. Pedro Carmona, found that infrared radiation can be used to differentiate between various clinical stages of Alzheimer's disease development.

Measurement of the absorption or emission of infrared radiation by white blood cells could be used as a highly sensitive method of reliably diagnosing both mild and moderate stages of Alzheimer's. The research was published online in the *Analytical & Bioanalytical Chemistry*.

The authors concluded that, "The method we used can potentially offer a more simple detection of alternative biomarkers of Alzheimer's disease. Mononuclear leukocytes seem to offer a stable medium to determine ß-sheet structure levels as a function of disease development. Our measurements seem to be more sensitive for earlier stages of Alzheimer's disease, namely mild and moderate." MI

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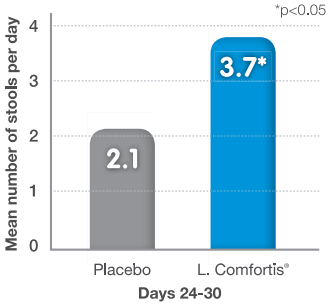

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2nd Asian Pacific Meeting on Helicobacter Pylori, 13-15 January, Kuala Lumpur.

Tweaking treatment for H. pylori infections

Leonard Yap

Selecting better antibiotic therapy strategies for *Helicobacter pylori* infections and educating patients about compliance to their medications is the best way to avoid antibiotic resistance, says an expert.

Using a combination of antibiotics with the right duration of therapy, in addition to improving patient compliance to these medications, will prevent *H. pylori* resistance to antibiotics, said Dr. Francis Megraud, professor of bacteriology, University Victor Segalen Bordeaux 2 and head of the National Reference Center for Helicobacters, France. Currently, clarithromycin is a commonly used antibiotic for *H. pylori* infections, but "the burden of clarithromycin resistance is steadily increasing."

Resistance of *H. pylori* to metronidazole and clarithromycin has been reported, with metronidazole resistance being very common. This has an important clinical impact on dual antibiotic therapies and standard triple therapies, which include the use of a proton pump inhibitor (PPI) and two antibiotics. When PPI-based triple therapies with amoxicillin or clarithromycin and metronidazole are used, the resistance could be overcome in up to 75 percent of cases. [*Gut* 1998;43 (suppl 1):S61-5]

"Several factors influence eradication failure. Obviously, if you don't take the drug, [there is] lack of compliance [resulting in a decrease in the eradication rate], and, if you have [high] gastric acidity, especially if you are an extensive metabolizer of PPI, you decrease your eradication rate. It has also been shown that when you have a high bacterial load you are less likely to eliminate the bacteria – possibly, the presence of intracellular bacteria or the impact of altered immunity [can decrease the eradication rate of *H pylori*]," Megraud said.

The Second Asia-Pacific Consensus Conference was convened to review current information on *H. pylori* management and a set of updated consensus statements was issued. **(Box 1)** [*J Gastroenterol Hepatol* 2009;24:1587-600] MT

Box 1: Consensus statements on H. pylori management.

- In Asia, the currently recommended first-line therapy for *H. pylori* infection is PPI, amoxicillin and clarithromycin for 7 days.
- There is an increasing rate of resistance to clarithromycin and metronidazole in parts of Asia. This has led to reduced efficacy of PPI-based triple therapy.

2nd Asian Pacific Meeting on Helicobacter Pylori, 13-15 January, Kuala Lumpur.

■Fourteen-day triple therapy confers limited advantage over 7-day triple therapy in *H. pylori* eradication rates.

■Bismuth-based quadruple therapy is an effective alternative to first-line therapy for *H. pylori* eradication.

■There are currently insufficient data to recommend sequential therapy as an alternative first-line for *H. pylori* therapy in Asia.

■Salvage therapy for *H. pylori* eradication includes: (i) a standard triple therapy that has not been previously used; (ii) bismuth-based quadruple therapy; (iii) levofloxacin-based triple therapy; and (iv) rifabutin-based triple therapy.

■CYP2C19 polymorphisms may affect *H. pylori* eradication rates in PPI-based triple therapy. Choice of PPI or increasing the dose is a more practical approach than CYP2C19 genotyping in the clinical setting to overcome CYP2C19 polymorphisms in the context of salvage therapy.

■Smoking adversely affects the outcome of *H. pylori* eradication therapy.

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Drug polymorphisms can affect response to H. pylori treatments

Leonard Yap

Cytochrome P450 2C19 (CYP2C19) polymorphisms may play a significant role in the success or failure of treatments for *Helicobacter pylori*, say a panel of experts.

CYP2C19 polymorphisms have been known to affect the metabolism of certain types of pharmaceuticals, said Associate Professor Varocha Mahachai, division of gastroenterology, Chulalongkorn University, Bangkok, Thailand.

This is particularly true of proton pump inhibitors (PPI), which are commonly used to control gastric acidity in *H. pylori* infections. Patients who have the 'extensive metabolizer' polymorphism tend to have poor control of gastric acid as they metabolize the drug too quickly before the PPI can do its job, she said. [*Aliment Pharmacol Ther* 1999;13 Suppl 3:27-36]

Another expert, Professor Fock Kwong-Ming, of the Faculty of Medicine, National University of Singapore and senior consultant gastroenterologist at Changi General Hospital said, "CYP2C19 polymorphisms may affect *H. pylori* eradication with standard triple therapy. The way to overcome this effect is to increase the dose of the PPI or change to a PPI that is less affected by CYP2C19."

"Three studies, one from Japan, one from Taiwan and one from Korea, show that the CYP2C19 [polymorphisms] were a factor [in *H. pylori* eradication]," he added.

PPIs such as omeprazole and lansoprazole are mainly metabolized by CYP2C19 in the liver. There are three types of CYP2C19 polymorphisms: extensive, intermediate and poor metabolizer. Extensive metabolizers are typically less responsive as they metabolize PPIs much faster than the intermediate and poor metabolizer. Therefore, eradication rates for *H. pylori* are typically lower for extensive metabolizers. [*Clin Pharmacol Ther* 2001;69(3):158-68]

In the Malaysian context, genotyping revealed significant differences in the prevalence rates of the poor metabolizer CYP2C19 polymorphism among the three main ethnic groups, with the Chinese recording the highest prevalence – 19.1 percent among Chinese, 5.6 percent among Malays and 10.0 percent in Indian subjects ($P \leq 0.05$). The overall genotypic prevalence of poor metabolizers in the Malaysian population was 12.6 percent. [*Br J Clin Pharmacol* 2004;58(3):332-5]

The Second Asia-Pacific Consensus Guidelines for *H. pylori* infection includes this statement: "CYP2C19 polymorphisms may affect *H. pylori* eradication rates in PPI-based triple therapy. Choice of PPI or increasing the dose is a more practical approach than CYP2C19 genotyping in the clinical setting to overcome CYP2C19 polymorphisms in the context of salvage therapy*." [*J Gastroenterol Hepatol* 2009;24:1587-600] MT

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References: 1. Antman EM, et al. *Circulation* 2007;115(12):1634-1642. **2.** Kearney PM, et al. *BMJ* 2006;332:1302-1308. **3.** Page J, et al. *Arch Intern Med* 2000;160:777–784. **4.** Aw TJ, et al. *Arch Intern Med* 2005;165:490-496.

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2nd Asian Pacific Meeting on Helicobacter Pylori, 13-15 January, Kuala Lumpur.

H. pylori eradication alters appetite hormone levels

Malvinderjit Kaur Dhillon

A change in *Helicobacter pylori* colonization status can potentially induce changes in ghrelin and leptin levels, thus influencing metabolic status and body weight, says an expert.

Dr. Fritz Francois, a gastroenterologist at the NYU Langone Medical Centre, NY, US, said, "Our group began to look at the functional elements of the gut as they relate to satiety hormones, and we focused on two in particular: leptin (an anorectic peptide which signals you when you have had enough to eat and, in fact, has a very strong anorectic effect) and ghrelin, perhaps one of the only known orexigenic peptides, one that stimulates appetite."

Varying studies demonstrated different effects of H. pylori *eradication on preprandial and postprandial ghrelin and leptin levels.*

"We are looking at the issue not only from the perspective of what is going on in *H. pylori* positive and negative [subjects], but also the impact of eradication on a meal. Ultimately, what you really want to know is the change – when you give somebody a meal, when somebody eats, what happens to these particular hormones before and after?" he added.

> **"...when somebody eats, what happens to these particular hormones before and after?**

The study by Fritz and his team involved a group that were primarily male and in their 60s. Blood was drawn at baseline and the subjects were fed a standardized meal. Blood was drawn an hour later and underwent eradication of *H. pylori.* The subjects returned after 6 weeks and the procedure was repeated.

"There is a drop in ghrelin levels post-meal, which is exactly what you would expect. After the eradication treatment, ghrelin levels are higher pre-meal compared to the pre-eradication group. Compared to the post-meal levels, there isn't a drop that you would expect. As for leptin, we found an increase in leptin levels in both instances," he said.

Fritz and his group also looked at body mass index (BMI) changes of these patients over a span of 18 months and found a positive co-relation between fasting ghrelin and change in BMI. As ghrelin levels increased with eradication, BMI levels also increased. [*BMC Gastro* 2011;11:37] MT

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Vaccination, early treatment of influenza important in pregnant women

Pank Jit Sin

The 2009 influenza A(H1N1) pandemic has shown that pregnant women should be treated early with antiviral therapy and vaccinated to reduce the risks associated with contracting the virus.

Speaking at the 5th Safe Motherhood Congress 2011 held in Kuala Lumpur recently, Professor Datin Che Ilina Che Isahak, a professor of medicine at Universiti Sains Islam Malaysia, Kelantan, said data on the pandemic serves as a postmortem for doctors to better prepare for future influenza outbreaks and to improve treatment regimens for pregnant women.

The 2009 pandemic was atypical of most seasonal influenza strains in that it caused mortality in the younger age groups, and pregnant women were not spared.

A *JAMA* report in 2010 revealed that of the 509 women hospitalized in the US with influenza A(H1N1), 115 were admitted to the intensive care unit (ICU) and 30 died. It found that pregnant women who were treated 4 days after symptom onset were more likely to be admitted to the ICU than those treated within 2 days of symptom onset [56.9 percent versus 9.4 percent, RR 6.0; 95%CI]. Additional data after the initial surveillance registered a total of 280 pregnant women admitted to the ICU, of whom 56 died. Of this number, 7.1 percent were in their first trimester, 26.8 in the second and 64.3 in their third trimester. [*JAMA* 2010;303(15):1517-25]

The same study associated the reluctance of pregnant women or clinicians to use antivirals as stemming from the concern of risk to the fetus despite evidence suggesting that treatment benefits outweighed potential risks, said Che Ilina. Also, doctors were inappropriately reliant on influenza diagnostic testing. The decision to treat should not be based on diagnostic testing, said Che Ilina, given the issues of performance and timeliness of currently available tests.

Vaccination for the pregnant mother bestows protection in the newborn for up to 6 months of age.

Che Ilina said that antivirals are best administered within 48 hours of the onset of influenza-like symptoms and treatment should be for 5 days. Clinicians are advised not to wait for test results as antivirals work best when started early. Prompt antiviral therapy is especially important during peaks of influenza infection such as epidemic and pandemic situations.

Vaccinate those who are pregnant

Pregnant women infected with the novel influenza A(H1N1) are also at risk of poor pregnancy outcomes, with an increased

risk of preterm and perinatal mortality. In a national cohort study carried out in UK, it was found that perinatal mortality was as high as 10 in 256 infants (39 per 1,000 births) of infected mothers compared with 9 in 1,233 infants of uninfected mothers. Pregnant women in the study were also more likely to have preterm deliveries. [*BMJ* 2011;342:d3214doi:10.1136]

Almost half of the preterm deliveries were due to early delivery for maternal compromise, indicating that the health of pregnant women is an important public health priority during influenza pandemics.

However, it is not just the novel influenza strains which place pregnant women and their child at increased risk of complications and mortality as the seasonal strains also put great strain on pregnant women. Che Ilina said: "Mechanical, immunological and hormonal changes of pregnancy contribute to this heightened risk [of hospitalization and complications]."

Maternal fever in the first trimester doubles the risk of neural tube defects and may be associated with birth anomalies such as cleft lip/palate and congenital heart defects, said Che Ilina. If the fever occurs during labor, babies could suffer from neonatal seizures, encephalopathy, cerebral palsy and even die.

In light of all the risks, Che Ilina said it is important to vaccinate pregnant women against influenza. The protection they gain from vaccination is passed on to the baby, and will last for the first 6 months. MT

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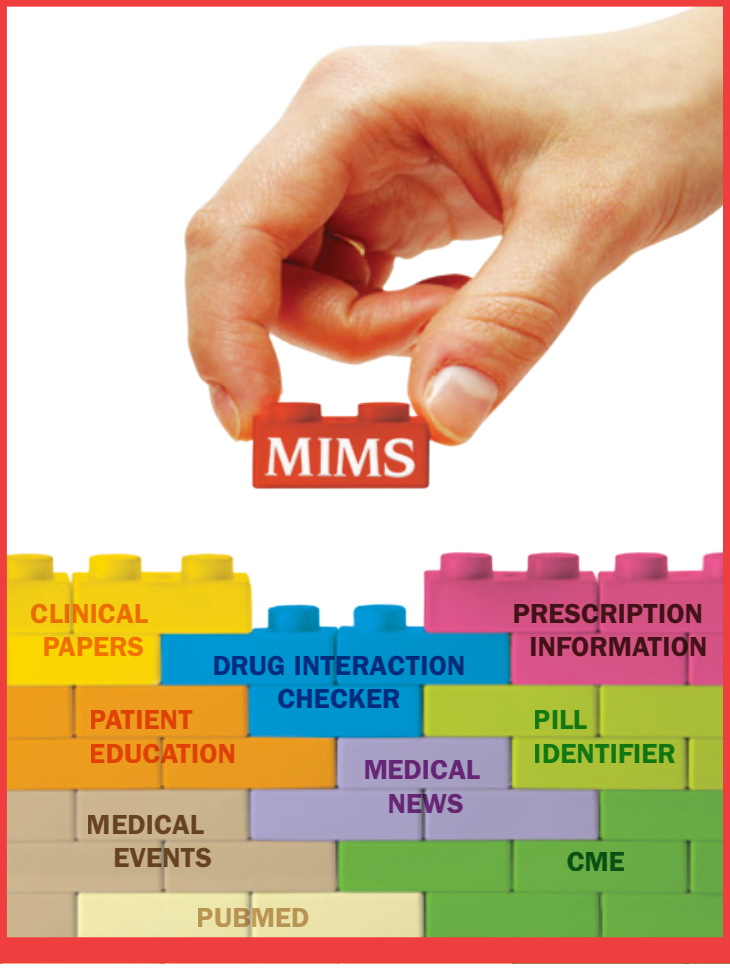

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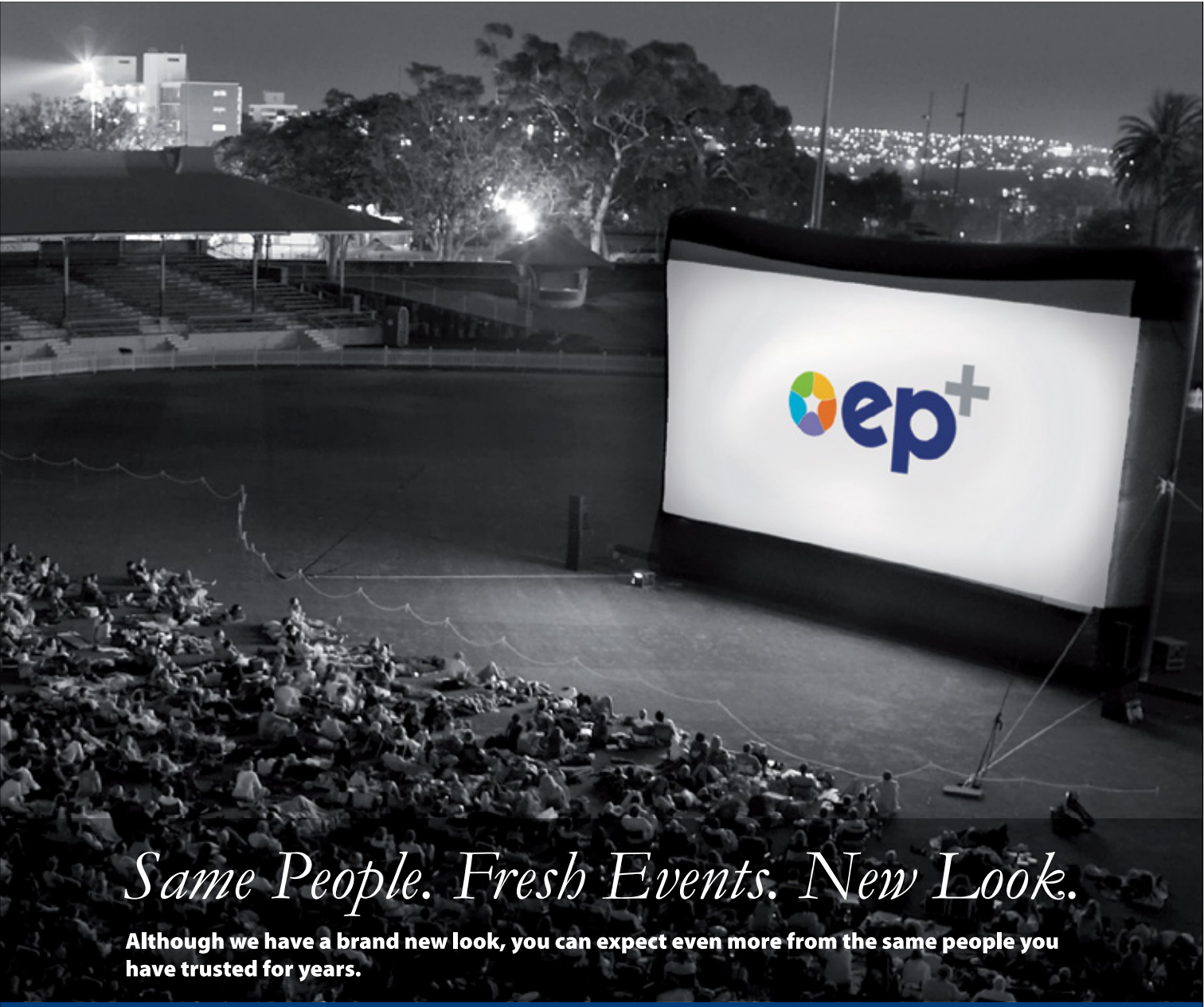

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MTAPR15-11/001

Thalassemia study: Severe iron overload common in South China

Christina Lau

Iron overload in the heart, liver, pancreas and pituitary is a serious problem among patients with thalassemia major (TM) in South China, according to a recent study by the Chinese University of Hong Kong (CUHK).

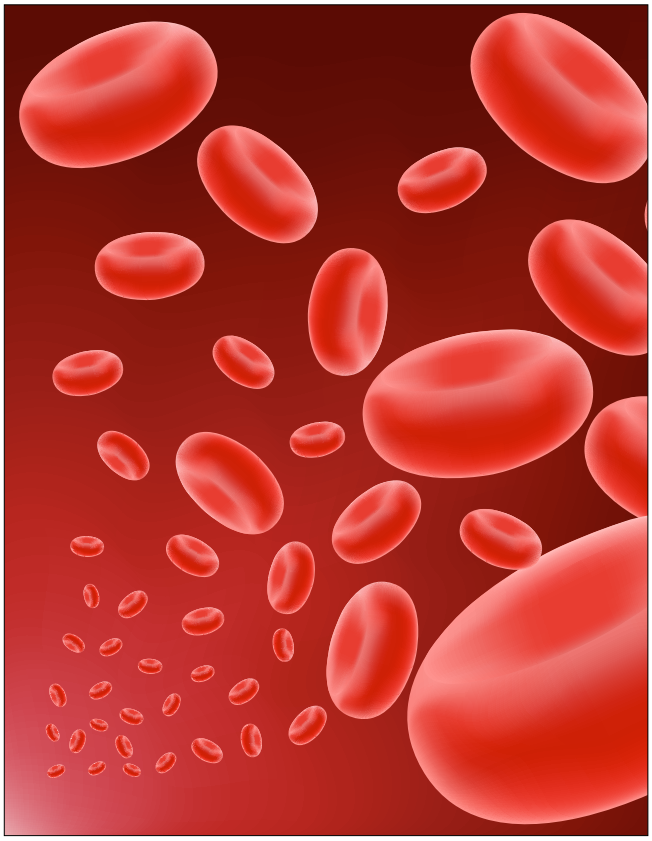
"Of the 153 TM patients we scanned, nearly a quarter had severe cardiac iron overload, putting them at immediate risk of death," said Professor Winnie Chu, of CUHK's department of imaging and interventional radiology, at a press conference. "The youngest patient with severe cardiac iron overload was only 9 years old."

In 2010, Chu and colleagues provided free MRI assessments to 153 young TM patients (median age 13 years) from six hospitals in Shenzhen, Guangzhou and Nanning to investigate the prevalence and severity of iron overload in various organs.

"Results showed that 36 percent of TM patients had cardiac iron overload, as measured by a T2* value below 20 ms. Severe cardiac iron overload [T2* <10 ms] was found in 24 percent of the patients," reported Chu.

Iron overload was also prevalent in the liver (95 percent), pancreas (85 percent) and pituitary (23 percent). In the cohort, 55 percent of patients had severe hepatic iron overload, as measured by a T2* value <1.4 ms.

"South China is home to the world's largest TM population, where the number of patients is estimated to exceed a million. However, blood transfusion and iron



chelation therapy are not widely available in the region, and MRI assessment for iron overload is unavailable," said Chu. "A high percentage of undiagnosed iron overload means that rational iron chelation strategies cannot be implemented. If the iron overload is not corrected, premature cardiac failure and death is inevitable in those patients in 5 to 10 years."

Based on the experience in Hong Kong, Chu said those premature deaths can be prevented by early MRI scanning and subsequent triage of treatment.

"A structured MRI program will be useful and cost effective for children and teenagers with TM in China. The MRI data will help mainland colleagues risk-stratify TM cases by iron load, so that treatment of proper

intensity can be provided," she suggested.

In Hong Kong, the crude incidence of death in TM patients has declined steadily since cardiac iron assessment by T2* MRI became available in 2006.

"In the past, cardiac iron overload was the main cause of death in TM patients, with few surviving beyond the age of 45 years," said Dr. Chi-Kong Li, of the department of pediatrics, Prince of Wales Hospital. "With T2* MRI assessment to direct iron chelation therapy, the prevalence of heart failure and cardiac hemosiderosis is reduced, which should reduce mortality and improve life expectancy. Today, 78 percent of TM patients in Hong Kong are in their adulthood." [*Hong Kong Med J* 2011;17:261-6]

With support from the Children's Thalassemia Foundation, cardiac iron assessment by T2* MRI has become available to all thalassemia patients in Hong Kong since 2006. "The MRI scanner at CUHK is the only scanner validated for T2* assessment in Hong Kong," said Chu. MT

Candidate driver genes identified in gastric cancer

Naomi Rodrig

A team of researchers from the University of Hong Kong and Pfizer Inc. has discovered 20 gene mutations implicated in stomach cancer. [*Nature Genetics* 2011;43:1219-23]

According to the investigators, this research could lead to the development of new drugs and testing of existing drugs that may be used to treat this cancer.

Previous studies showed that apart from mutations in the TP53 gene, alterations in other genes or pathways account for only small subsets of gastric cancer.

"The majority of cancer-causing mutations occur in exons, regions that constitute about 2 percent of the human genome and are responsible for protein synthesis," explained lead investigator Professor Suet-Yi Leung.

Using exome sequencing – a technology that can significantly speed up the sequencing process – the team analyzed over 160,000 exons in 22 stomach cancer samples and in normal controls.

"We identified previously unreported mutated genes and pathway alterations; in particular, we found genes involved in chromatin modification to be commonly mutated," the investigators reported.

Specifically, a downstream validation study confirmed frequent inactivating mutations in the ARID1A gene, which encodes a member of the SWI-SNF chromatin remodeling family. These mutations were found in 83 percent of gastric cancers with microsatellite instability, 73 percent of those with Epstein-Barr virus (EBV) infection and 11 percent of those that were not infected with EBV and microsatellite stable.

Chromatin, which functions to support the delicate DNA strand and compact its volume to fit in the cell, also controls DNA replication and gene expression.

"Chromatin modification genes constitute an emerging group of cancer driver genes with lots of interest by the pharmaceutical industry to pursue as drug targets," said Leung.

"New drugs that change the chromatin architecture are being developed. Other such drugs have been previously intended for the treatment of other diseases. With our findings of frequent mutations of the chromatin modification genes in stomach cancer, these drugs may now be explored to treat it."

The data also showed that the mutation spectrum for ARID1A differs between molecular subtypes of gastric cancer and mutation prevalence is negatively associated with mutations in TP53. Clinically, ARID1A alterations were associated with better prognosis in a stage-independent manner.

"These results reveal the genomic landscape, and highlight the importance of chromatin remodeling, in the molecular taxonomy of gastric cancer," wrote the authors.

"Deciphering all the mutations associated with gastric cancer improves our understanding of how this cancer develops and may provide ways for early detection and personalized treatment," added Leung. MT

Further info is available upon request.

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Aerobic exercise improves cognition in early psychosis

Christina Lau

Aerobic exercise improves learning ability and long-term memory of patients with early psychosis, a study by the University of Hong Kong (HKU) has shown.

The study included 35 patients with early psychosis who were randomized to receive a 12-week exercise intervention in addition to their current treatment or to continue with their current treatment for 12 weeks. The exercise intervention consisted of three sessions of aerobic exercise training (walking on a treadmill plus stationary cycling) per week, with each session lasting 40 to 50 minutes.

"Preliminary results showed that patients receiving exercise intervention had significantly improved verbal acquisition and long-term memory, as assessed by the Hong Kong List Learning Test," said principal investigator Professor Eric Chen, of the department of psychiatry. "After the 12-week study period, patients in the exercise group had a 26 percent increase in mean score in the learning test [from 23.8 at baseline to 30] and a 27 percent increase in mean score in the memory test [from 8.8 to 11.2], versus increases of 6 percent and 8 percent, respectively, in the control group."

The mean scores in healthy individuals were 36 and 13.4, respectively, for verbal acquisition and long-term memory.

According to Chen, the preliminary data indicate that aerobic exercise can reverse some cognitive deficits in early psychosis.

FitMind ambassadors demonstrate the 10 FitMind movements.

"The cognitive improvement associated with aerobic exercise may be mediated by neural plasticity in the brain," he suggested. "Based on the study, we developed a series of exercise named FitMind movements in collaboration with the Hong Kong Early Psychosis Intervention Society. The exercise is designed according to the specific needs and ability of psychosis patients."

A series of activities, including publicity campaigns and an exercise coaching system, will be organized in the coming months to promote exercise and motivate patients with early psychosis. (***www.episo.org/FitMind.html***) MT

Latest research provides practical tips for infection control

Christina Lau

Although N95 masks provide a better seal than surgical masks in reducing forward expulsion of exhaled air during coughing, latest research shows that there is still substantial sideway leakage.

"The take-home message is that putting N95 masks on patients doesn't provide 100 percent protection for healthcare workers. From a practical perspective, it may be better for inpatients to wear surgical masks instead of N95 masks for greater comfort and compliance," said Professor David Hui, of the department of medicine and therapeutics, Chinese University of Hong Kong (CUHK), who presented the new findings at his inaugural lecture as the Stanley Ho Professor of Respiratory Medicine.

Hui and colleagues compared air leakage distribution during simulated normal coughing when the patient was wearing no mask, a surgical mask and an N95 mask. Results showed that the N95 mask was better than the surgical mask in reducing forward dispersion of exhaled air from the patient during normal coughing effort. The dispersion distance was 15 cm and 30 cm, respectively, versus 68 cm for no mask. [Hui DS, *et al*. Manuscript in preparation]

"However, there was substantial sideway dispersion of 13 cm with the N95 mask," Hui reported. "The sideway dispersion distance with the surgical mask was 23 cm, while no such dispersion was observed when the patient wasn't wearing a mask.

"It would be more practical for inpatients to wear surgical masks for hospital infection control purposes, as they will take off the N95 mask within 2 hours due to headache and pressure sore around the nasal bridge," he suggested.

In isolation room settings, Hui and colleagues showed that room dimension and air exchange rate were important for preventing room contamination during oxygen therapy and non-invasive ventilation (NIV). "Isolation rooms at the Princess Margaret Hospital, which are larger with 16 air exchanges per hour [ACH], are relatively more efficient in air mixing and removing exhaled air from the patient than the smaller isolation rooms at the Prince of Wales Hospital that perform 12 ACH, although the latter are also up to WHO standard," he said. [*Respirology* 2011;16:1005-13]

Previous studies by the team demonstrated substantial leakage of exhaled air from different face masks during oxygen therapy or NIV for respiratory failure. The exhaled air can be dispersed up to 1 m away from the patient even in an isolation room with negative pressure, posing infection risks to healthcare workers. "Leakage and room contamination were more extensive with masks that require connection to a carbon dioxide eliminator," Hui noted. "Thus, it's advisable to choose face masks with predictable exhaled air directions and distances through the exhalation port that do not require addition of a whisper swivel device. High inspiratory pressures should be avoided." [*Chest* 2006;130:822-6; *Chest* 2009;136:998-1005] MT

Tightening controls on traffic emissions

Naomi Rodrig

To improve roadside air quality, the Hong Kong Environmental Protection Department (EPD) has announced proposals to strengthen control of vehicles using petrol and liquefied petroleum gas (LPG) that emit toxic exhaust gases excessively. The government will also provide a one-off subsidy for owners of LPG taxis and light buses to replace the catalytic converters in their vehicles.

"With the implementation of a host of measures to improve air quality, the concentrations of sulphur dioxide and respirable suspended particulates recorded at street level have dropped significantly in the past 10 years. However, the roadside concentrations of nitrogen dioxide have risen over the same period. Our efforts should focus on tackling the source of these pollutants," said an EPD spokesman.

Poorly maintained petrol and LPG vehicles emit excessive colorless exhaust gases, including nitrogen oxides, which are a significant cause of high roadside air pollution index (API) readings, as well as hydrocarbons and carbon monoxide. "These gases are invisible but can be detected and measured by remote sensing equipment," the spokesman said. "Such technology has been adopted by countries such as the US and Taiwan to identify petrol and LPG vehicles with excessive emissions."

Under the scheme, mobile roadside remote-sensing equipment will be deployed by 2013 at various locations in Hong Kong to identify petrol and LPG vehicles that emit excessively.

According to the proposals, owners of the emitting vehicles will be required to rectify the problem and ensure their vehicles pass a dynamometer emissions test at a designated vehicle emissions-testing center. Failure to pass the test within a prescribed period will lead to cancellation of the vehicle's license. The proposed scheme is similar to the existing Smoky Vehicle Control Program, which targets diesel vehicles.

The major reason that petrol and LPG vehicles emit excessively is their old catalytic converters, which can cause emissions 10 times the normal levels. "In busy urban corridors, taxi and light bus emissions account for 39 percent of nitrogen oxides and 55 percent of hydrocarbons," the spokesman added.

To help owners of LPG taxis and light buses adapt to the proposed emissions controls, the government has earmarked HK$150 million for a one-off subsidy to replace vehicles' catalytic converters before the new control scheme is implemented.

The EPD launched a consultation on the proposals to seek the views of stakeholders, including relevant trades and the Legislative Council. MT

HK-made hearing technology wins innovation award

Naomi Rodrig

ACEHearing™ – the world's first hearing technology to integrate hearing test and custom sound enhancement in consumer electronic devices – won the bronze award and the audience choice award at The Wall Street Journal's 2011 Asian Innovation Awards.

ACEHearing, which stands for Automated Customized Enhanced Hearing, was developed by the Chinese University of Hong Kong (CUHK) and Ximplar Ltd, a Hong Kong-based software company founded in 2007.

Developed by a team of doctors, audiologists, and sound and software engineers, ACEHearing allows a user to self-administer a clinically proven hearing test on an everyday electronic device, and within seconds, automatically calibrates the device to enhance sound output based on the user's specific hearing deficiency. According to the inventors, it results in a customized optimal hearing experience for a wide range of users, from people with severe hearing loss to those with mild deficiency who do not require a hearing aid.

"About 38 percent of the world's population suffer from some degree of hearing loss, but less than 10 percent of them actually seek professional help," said Professor Andrew van Hasselt, lead-inventor of ACEHearing and chairman of the department of otorhinolaryngology, head and neck surgery at CUHK. "ACEHearing will help this population to improve both productivity and quality of life by putting an affordable and high-quality hearing solution into their hands. It is a whole new class of hearing enhancement technology that stands to change the paradigm of how we experience sound according to an individual's unique hearing profile."

By integrating the hearing test with sound enhancement, ACEHearing adjusts audio output by filling in and amplifying only the missing frequencies based on the user's hearing test result. In clinical trials, test subjects have shown significant preference for ACEHearing-enhanced speech and music through a smartphone, and also experienced significant improvement in speech recognition in noisy environment without having to increase volume.

> "ACEHearing's first application will be on smartphones ...

"ACEHearing's first application will be on smartphones, but the possibilities are endless. We see a future for ACEHearing in all devices that produce and relay sound: tablets, computers, MP3 players and even network switches and servers," said Paul Lee, co-inventor of ACEHearing and executive director of Ximplar. "We are in active discussions with potential partners to make it commercially available soon. Consumers can expect to use the technology in 2012."

The Asian Innovation Awards contest, presented by *The Wall Street Journal*, attracted over 250 entries from across Asia this year. The winners were announced at a gala ceremony in Hong Kong in November 2011. MT

Study reveals low public awareness of stroke in HK

Christina Lau

Most people in Hong Kong do not recognize the symptoms and risk factors of stroke, according to the results of a recent survey.

"In our telephone survey, 91 percent of respondents did not recognize all symptoms of stroke, which include severe headache, weakness and numbness of the limbs, facial weakness and difficulty in speech," said Dr. Chen-Ya Huang, a specialist in neurology and vice president of the Hong Kong Stroke Fund. "Only 9 percent of the respondents recognized all stroke symptoms."

The results, released at the inauguration ceremony of the Fund, also showed that 71 percent of respondents did not recognize all risk factors of stroke, which include hypertension, hypercholesterolemia, excessive alcohol intake, smoking and diabetes.

Furthermore, 19 percent of the respondents misunderstood that stroke was a type of heart disease, while 3 percent thought it was a disease of the limbs.

The survey was commissioned by the Fund and conducted by the Hong Kong Polytechnic University. A total of 525 adults were interviewed in October 2011.

"Our results showed that misconceptions about stroke are common," said Huang. "It's alarming that most respondents did not recognize all symptoms and risk factors of stroke, and that severe headache could be a sign of stroke."

As stroke can lead to serious long-term complications such as paralysis and cognitive impairment, Huang stressed that there is a need to raise public awareness of the condition, which facilitates early recognition and treatment as well as stroke prevention.

"The fund was established to raise public awareness of stroke through public education programs, and to provide support to patients and caregivers through initiatives such as funding patient groups and setting up an emergency fund," said Dr. Dawson Fong, a specialist in neurosurgery and president of the fund's board committee.

Data from the Hong Kong Stroke Society show that on average, 18,000 people suffer from stroke every year, causing 3,500 deaths. [Hospital Authority Statistical Report 2009-2010. ***www.ha.org.hk/upload/publication_15/321.pdf***]

Based on a population of 7.3 million, it is estimated that about 1.2 million people in the city will suffer from a stroke in their lifetime. [World Stroke Organization. ***www.worldstrokecampaign.org/2011/Pages/Home.aspx***]

"The first 3 hours after stroke onset are critical for treatment, as patients treated within this window have a 50 percent lower risk of disability and death," pointed out Huang. [*Lancet* 2004;363:768-74] "However, only 10 percent of patients could reach a hospital and receive emergency treatment in the first 3 hours after stroke onset. Substantial effort should be made to boost public awareness of stroke and its early treatment." MT

Intracranial stenting prevents stroke in high-risk patients

Christina Lau

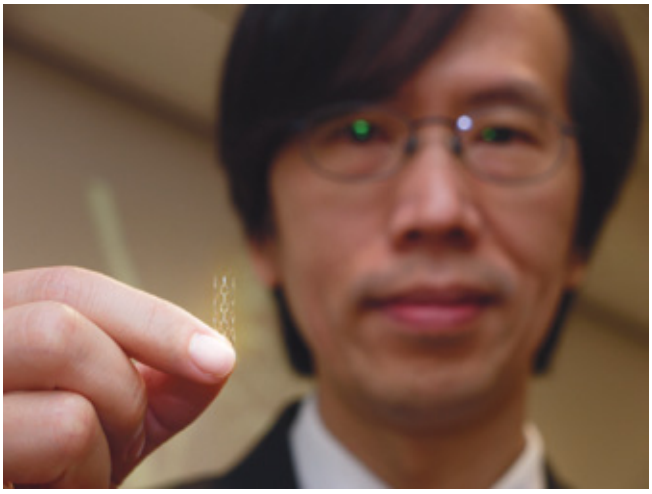
Intracranial stenting may offer hope for patients with severe intracranial stenosis who have symptomatic minor ischemic stroke or transient ischemic stroke (TIA) despite medical therapy.

A study by the Chinese University of Hong Kong (CUHK) showed that the procedure is safe and effective for stroke prevention in these patients.

"For patients with severe intracranial stenosis of over 70 percent, the annual risk of stroke is high at 23 percent despite medical therapy," said Professor Simon Yu, of the department of imaging and interventional radiology. "Bypass surgery is feasible in only 20 percent of cases, and it's not better than medical therapy in stroke prevention."

In 2006, Yu and colleagues from the Vascular and Interventional Radiology Foundation Clinical Science Center and the Division of Neurology started evaluating the safety and effectiveness of the Wingspan™ intracranial stent for stroke prevention in patients with severe intracranial stenosis (≥70 percent) who presented with symptomatic ischemic stroke or TIA despite drug therapy.

"We need local data because the etiology of ischemic stroke in Asians is different from that in Caucasians," said Yu. "In Asians, intracranial stenosis accounts for 30 to 40 percent of ischemic stroke cases, whereas in Caucasians this accounts for only 8 to 10 percent of cases."



Professor Simon Yu holding an intracranial stent.

In the study, 93 patients (male, n=69; female, n=24) aged 34 to 84 years received intracranial stenting with the Wingspan stent and were followed up for an average of 36 months. "The success rate of the stenting procedure was 95.7 percent," reported Yu. "As for safety, the rate of death or stroke within 30 days of the procedure was 5.4 percent, compared with 9.6 percent in international studies."

Importantly, the risk of stroke after intracranial stenting was 6.1 percent per year – much lower than the annual rate of 23 percent in patients treated with drug therapy alone. "At 12 months, the rate of in-stent restenosis was 13.6 percent, indicating that the intracranial stent kept blood vessels open and blood supply normal in 86.4 percent of patients," said Yu.

"Our study shows that intracranial stenting with Wingspan is safe and effective for stroke prevention in high-risk patients. The risk associated with the procedure is still relatively much more acceptable compared with the annual stroke risk if these

patients are treated with medical therapy alone."

Based on these findings, the researchers recommended that patients at high risk of ischemic stroke should consider intracranial stenting for stroke prevention. "These patients should be referred to experienced centers for treatment as the procedure is still risky and its safety is closely related to the experience of the operating team," said Yu.

"Furthermore, the government should consider subsidizing the treatment cost," he continued. "Currently, patients in most public hospitals have to bear the cost of the stent and related consumables, which amounts to HKD 45,000. Successful prevention of stroke will allow significant saving of resources in hospitalization, rehabilitation and disability care." MT

Social life and drinking may help preserve cognitive function

Christina Lau

Active participation in cognitive leisure activities and moderate drinking may help preserve cognitive function in late life, as a Hong Kong study finds that they are associated with better cognitive function in elderly persons.

According to the authors, the findings illustrate the importance of a multifaceted lifestyle as a potential strategy for preventing dementia. [*East Asian Arch Psychiatry* 2011;21:152-6]

The 2-year prospective study included 476 cognitively healthy community-dwelling individuals aged 60 to 92 years. Researchers from the department of psychiatry, Chinese University of Hong Kong (CUHK) and Tai Po Hospital assessed them using a battery of cognitive tests and questionnaires on their leisure activities and sense of loneliness.

Results showed that a high level of cognitive activity participation and a low level of loneliness were associated with better cognitive test performance.

In multivariate logistic regression analyses, high cognitive function was significantly associated with more years of education (odds ratio [OR]=1.27), a higher frequency of alcohol drinking (OR=1.17) and lower levels of overall loneliness (OR=0.79).

"The subjects reported in this study were primarily social drinkers who consumed in moderation. The majority drank only a few times per month," wrote the authors.

"Recent studies supported some gains in terms of cognition from moderate drinking. However, many of these studies were inconclusive, as they depended on cross-sectional surveys based on self-reporting."

The current study suggests that active and frequent participation in cognitive activities, accompanied by physical activity, may be related to sustainment of high intellectual function into old age.

Nevertheless, the authors noted that further studies should explore interactions between social factors and cognitive ability in older adults without significant cognitive impairment. MT

New paradigms in hepatitis C management

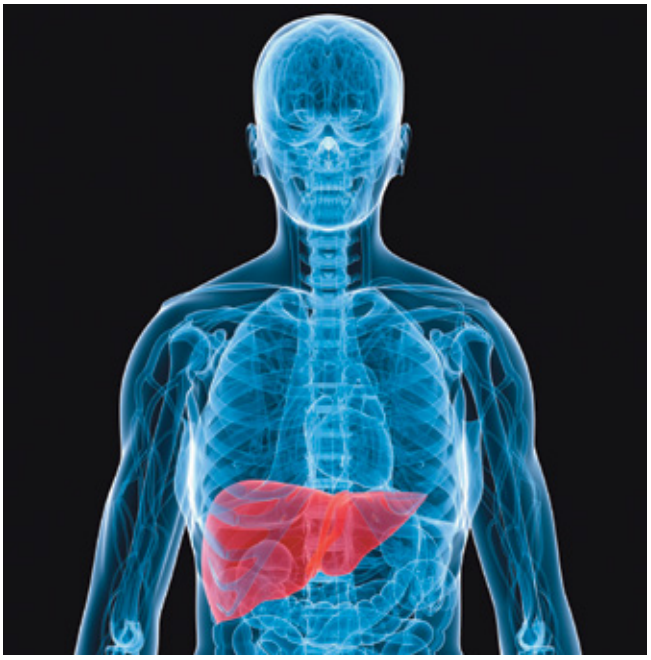
Naomi Rodrig

The recent approval of boceprevir and telaprevir has expanded the treatment options for hepatitis C, offering a chance of cure for difficult-to-treat patients with hepatitis C virus (HCV) genotype 1 infection, according to Professor Paul Kwo, of Indiana University, Indianapolis, US.

Speaking at the recent International Symposium on Hepatology 2011 organized by the Hong Kong Association for the Study of Liver Diseases (HKASLD), Kwo reviewed the trial data that led to the US FDA's approval of the new agents earlier last year and discussed their clinical use.

"Boceprevir and telaprevir are both viral NS3 protease inhibitors which work by inhibiting HCV replication. These agents belong to a new class of direct-acting antiviral drugs that will usher in a new era of treatment for HCV infection," he said.

Both drugs are indicated as add-on treatment to the current standard hepatitis C treatment, which relies on pegylated interferon and ribavirin (PR). Both have been approved for treatment-naïve as well as relapsing and non-responding patients.



Patients with genotype 1 hepatitis C may be cured with the new antivirals.

Treatment-naïve patients

"For HCV genotype 1-infected individuals, the addition of telaprevir or boceprevir to PR markedly improved sustained virologic response [SVR] rates," reported Kwo.

"With PR alone, less than 50 percent of genotype 1 patients respond to therapy."

SVR after treatment completion suggests that HCV infection has been cured, which results in decreased cirrhosis and complications, as well as a lower risk of hepatocellular carcinoma.

In the phase III ADVANCE trial, the SVR rate for treatment-naïve patients who received telaprevir-containing regimens was 75 percent, compared with 44 percent in the PR control group. [*N Engl J Med* 2011;364:2405-16]

Boceprevir approval was based on the SPRINT-2 study, which demonstrated an overall SVR of 63 to 66 percent versus 40 percent with PR alone. [*N Engl J Med* 2011;364:1195-206]

Response-guided therapy

Both trials applied a response-guided therapy approach, wherein the need for treatment continuation was determined by the presence of extended rapid viral response (eRVR; undetectable HCV RNA).

"For example, if HCV RNA was

undetectable at weeks 4 and 12 of telaprevir treatment, therapy was stopped at 24 weeks; while if HCV RNA was detected at week 4 but undetectable at week 12, patients completed a total of 48 weeks of therapy," Kwo explained. "Over half of the individuals who received this treatment in trials were able to truncate therapy at 24 weeks, as confirmed in another trial where 24- and 48-week treatment regimens were shown to be equivalent if patients achieved eRVR." [*N Engl J Med* 2011;365:1014-24]

Similar results were demonstrated with boceprevir, prompting the FDA to recommend response-guided therapy for most hepatitis C patients receiving the new antivirals. "Those with cirrhosis should probably complete a full 48-week course of therapy," advised Kwo.

Relapsers and non-responders

Further studies have confirmed the efficacy of adding boceprevir and telaprevir in patients who fail to achieve SVR on PR therapy alone.

"The recent publication of the phase III RESPOND 2 trial with boceprevir added to PR in relapsers and partial responders, and the phase III REALIZE study evaluating telaprevir in addition to PR in this population demonstrated that the future is bright for many non-responders with genotype 1 hepatitis C, with high SVR rates being noted," remarked Kwo.

The addition of boceprevir to PR markedly improved SVR, with relapsers achieving an SVR rate of 75 percent and partial responders achieving 52 percent. [*N Engl J Med* 364;1207-17] Adding telaprevir to PR improved SVR to 85 percent for relapsers, with partial responders achieving an SVR of 55 percent and null responders (<2 log reduction in HCV DNA counts) an SVR of 31 percent. [*N Engl J Med* 2011;364:2417-28] Lower SVR rates were noted in the most poorly PR-responsive individuals.

Kwo pointed out that with both telaprevir and boceprevir, patients who do not achieve SVR are those who are poorly responsive to PR and those who develop resistance-associated HCV variants because of the low barrier to resistance with the NS3/NS4 inhibitors.

"Moreover, SVR rates in the most poorly PR-responsive patients with advanced fibrosis have been less than optimal. Thus, judicious selection of patients will be required to maximize SVR and minimize resistance," he argued.

Futility rules for telaprevir include HCV RNA levels >1,000 IU at weeks 4 and 12 for detectable HCV RNA at week 24. Futility for boceprevir is week 12 HCV RNA >100 IU for detectable HCV RNA at week 24.

"However, those with advanced fibrosis may be offered therapy with the recognition that while there is a risk of resistance, the opportunity for SVR also exists," he suggested.

Safety

Kwo noted that – as with all new drugs – the side effects will need to be carefully addressed in patients being treated with PR and boceprevir or telaprevir.

"With telaprevir, rash, anemia and gastrointestinal side effects are all increased when added to PR. With boceprevir, the primary side effects are anemia and neutropenia," he said.

"As for drug/drug interactions, there is a list of contraindicated medicines with both of these drugs that must be addressed prior to initiation of therapy." MT

Cardiac denervation may correct abnormal heart rhythms

Rajesh Kumar

Bilateral cardiac sympathetic denervation (BCSD) may be a useful last resort in stopping irregular ventricular arrhythmias, according to US cardiologists.

The procedure involves snipping nerves related to the sympathetic nervous system on both left and right sides of the chest. These nerves are responsible for the body's 'fight or flight' response, and cutting them may interrupt pro-arrhythmic signaling within the heart tissue or stellate ganglion, thus stopping irregular heart rhythms.

Researchers at the University of California Los Angeles (UCLA) reviewed records from six patients presenting with ventricular arrhythmias in a small pilot study to assess the impact of BCSD. [*J Am Coll Cardiol* 2012;59:91-2]

The patients' average age was 60 years and they were all poor candidates for a heart transplant. After conventional treatments such as medications, catheter ablation and an implantable cardiac defibrillator (ICD) had failed, the patients were operated upon to snip the cardiac sympathetic nerves leading to both sides of the heart.

After the surgery, four of the six study patients completely responded with no more arrhythmias. One patient had a partial response and one had no response at all. With their heart rhythms stabilized, three of the responding patients received no more shocks from their ICDs, which would previously occur when the devices tried to normalize irregular rhythms, said the researchers. One of these patients had been experiencing 11 shocks a day.

The patient who partially responded to treatment had a shock reduction of more than 50 percent. Two of the responding patients passed away after discharge due to health issues not related to arrhythmias. No major operative complications occurred in the patients studied, the researchers added. Typical side effects related to this procedure, such as alterations in sweating or temperature regulation, were not significant.

> "We ... plan to further examine the role of this procedure in suppressing arrhythmias in a larger patient population

"We are encouraged by this small study's results, and plan to further examine the role of this procedure in suppressing arrhythmias in a larger patient population," said lead author Dr. Olujimi Ajijola, a cardiology fellow at UCLA.

Dr. Ching Chi Keong, senior consultant in the department of cardiology and director of the electrophysiology and pacing at National Heart Centre Singapore, said fortunately there are not too many patients who may require such an aggressive treatment that could play an adjuvant role to conventional therapy, including catheter ablation.

Commenting on the findings' relevance, Ching said such advances in treatment modalities enable doctors to prolong survival and improve quality of life for patients,

and suggested GPs should identify and refer those who may benefit from these therapies.

The study builds on the previous work wherein the procedure was done only on the left side. But some patients may need the procedure performed bilaterally to get relief.

The findings add to a growing field of research into the sympathetic nervous system's impact on stress and possible role in disease. MT

Misperceptions about body image tied to depression

Sue Mulley

Students commencing university with unrealistic perceptions of their own body weight and an unhealthy body image appear to be at higher risk of developing depression, according to a Hong Kong study.

Normal-weight girls who thought they were fat were more than twice as likely to suffer from depression compared to their peers.

Boys who actually were underweight (body mass index [BMI] <18.5 kg/m^2) were three times as likely to be depressed as their peers, reported Si-Ya Liu in a poster presentation. Liu is a PhD student at Chinese University of Hong Kong's (CUHK) School of Public Health and Primary Care.

She pointed out that previous studies have shown body weight misperception and body image dissatisfaction are associated with the increasing problem of depression that affects >20 percent of university entrants in Hong Kong. [*Aust NZ J Psychiatry* 2006;40:777-82]

Liu's study investigated the prevalence, patterns and correlates of body weight misperception, and the relationships with body image dissatisfaction and depression risk.

Data was analyzed from the 2008 student health survey of the CUHK. Overall, 1,156 students (521 boys and 635 girls) were assessed using the Center for Epidemiologic Studies Depression Scale (CES-D-10), revealing that 17.8 percent of boys and 23.0 percent of girls suffered from depressive symptoms.

Almost one in three new university students had misperceptions about their body weight (34.0 percent of girls and 25.6 percent of boys).

Among girls with a BMI of 18.5-22.9, approximately 74 percent felt they were 'about right', 1.4 percent felt they were 'slightly underweight'; 24.3 percent felt they were 'overweight', and 0.6 percent 'very overweight'.

For males with BMIs ranging from 18.5-22.9, 0.2 percent felt they were 'very underweight'; 20.4 percent felt 'underweight'; 70.5 percent 'about right'; and 8.9 percent 'overweight'.

Body weight misperception appears to be an increasing problem among adolescents in Hong Kong, although study supervisor, Professor Jean Kee Kim conceded that hard data is lacking and the current picture is complex.

"In Hong Kong, the mean BMI for girls is 19.9, and the discrepancy between the actual and ideal [18.0] is probably not as wide as in places such as the US that have a much larger range of BMIs," she said. MT

HKU upgrading primary care research and teaching

Naomi Rodrig

The department of family medicine and primary care of the University of Hong Kong (HKU) was officially inaugurated last month to promote the study and practice of evidence-based healthcare in the primary setting.

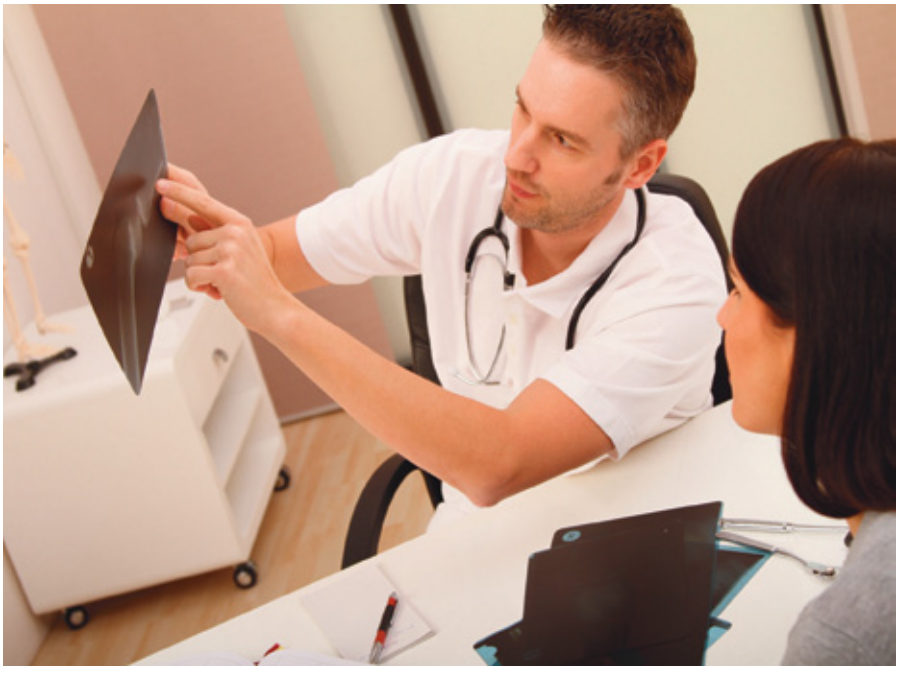
"This newly established department is dedicated to teaching our medical graduates how to become more patient-centered, humane, effective, efficient, communicative and empathetic doctors," said Professor Cindy LK Lam, head of the new department, at the inauguration ceremony. "Family medicine distinguishes itself from other disciplines by its emphasis on holistic and comprehensive care that counters the growing trend of fragmented, specialized medical care."

The department's mission is to promote health and best evidence-based practice for the local population and collaborate with other medical, nursing, healthcare and social disciplines in research and service, she added.

To mark the launch of the department, the Family Medicine and Primary Care Symposium was held following the ceremony.

Plenary sessions focused on the agenda and outcome measures in primary care research, equity in healthcare delivery, and the role of information and education in family medicine. Another plenary was devoted to mental healthcare delivery in primary-care settings and the role of family doctors in providing psychiatric services in the community. A special session highlighted the increasing emphasis on primary care in the medical curriculum, while a panel of leading local and overseas experts shared their experience in integrating evidence and practice in primary care in an interactive forum discussion.

"This symposium is the beginning of a continuing primary care research initiative that the department has committed to carry out in Hong Kong and the region," remarked Lam. MT



HKU's newly established department of family medicine and primary care aims to promote health and evidence-based practice.

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Reining in needless tests to reduce healthcare costs

Pank Jit Sin

Excessive and unnecessary use of some diagnostic and screening tests should be curtailed in order to reduce increasing healthcare costs in the US, according to an editorial in the *Annals of Internal Medicine*.

Due to the rapidly increasing cost of healthcare, authors of the editorial called for fellow doctors to concentrate on finding ways of delivering high-value, cost-conscious healthcare. [*Ann Intern Med* 2012;156:147-9]

The authors pointed out the importance of differentiating cost and value as a costly intervention may prove to be of good or high value, while a cheap or low-cost intervention could be of little to no value if it did not bring enough benefits.

An example of a high-cost and high-value intervention would be the use of antiretrovirals in the treatment of HIV. Conversely, annual Pap smears in low-risk women is a good example of a low-cost and low-value procedure.

The American College of Physicians put together a group of experienced internists in order to identify common screening and diagnostic tests relevant to internal medicine which they believe were commonly overused. Each member of the group identified screening or diagnostic tests that they believed were commonly used in clinical situations, but were unlikely to be of high value.

Any tests which retained unanimous support from the group were retained in the list. Tests which received at least two-thirds of the group's support were then discussed until a unanimous consensus was achieved. If unanimity could not be achieved, the tests were discarded. The group came up with a list of 37 tests which they believed did not reflect high-value and cost-conscious decisions and, did not adhere to current clinical guidelines.

Five situations and their related tests which did not reflect high-value care were as follows: electrocardiograms to screen for cardiac disease in patients at low-to-average risk for coronary artery disease; annual lipid screening for patients not receiving lipid-lowering drug or diet therapy in the absence of reasons for changing lipid profiles; screening low-risk individuals for hepatitis B virus infection; screening for cervical cancer in low-risk women aged 65 or older and in women who have had a total hysterectomy for benign disease; using CA-125 antigen levels to screen women for ovarian cancer in the absence of increased risk. (The complete table can be viewed at ***www.annals.org/content/156/2/147.full.pdf+html*** Accessed on 22 January)

The authors suggested some principles for providing high-value, cost-conscious care, chief of which is that diagnostic tests should not be performed if the results will not change management. Secondly, if the pre-test possibility of a disease is low, then the likelihood of a false positive result will be higher than the likelihood of a true positive result.

Finally, they reminded doctors that the true cost of a test includes not only the cost of the test itself, but also the entire cascade of downstream costs incurred as a result of the unnecessary test. MT

Statin use linked to lower death rate in flu patients

Elvira Manzano

The use of statins – cholesterol-lowering drugs – may reduce the risk of death in patients hospitalized for influenza.

In a large US study, the administration of statins to flu patients before or after hospitalization reduced mortality rates by 41 percent (odds ratio=0.59; 95% CI 0.38-0.92) after adjusting for age, race, cardiovascular, lung and renal disease, influenza vaccination and antiviral administration. [*J Infect Dis* 2012;205:13-9]

"Our findings suggest that statins are a promising area of exploration and could provide a useful adjunct to antiviral medications and vaccine, particularly in settings where circulating influenza virus strains are not susceptible to antiviral medications or vaccine is in short supply or not well matched to circulating viruses," said study author Dr. William Schaffer, professor and chair of preventive medicine at Vanderbilt University Medical Center, Nashville, Tennessee.

In the study, patients who received statins were more likely to be older, male and white, to suffer from cardiovascular, metabolic, renal and chronic lung disease, and to have been vaccinated against influenza.

The researchers examined the 30-day mortality figures from 3,043 patients with laboratory-confirmed influenza who were admitted to US hospitals during the influenza season in 2007 and 2008. The median age of the patients was 70.4 years and 56 percent were women.

Among the hospitalized patients, 1,013 (33.3 percent) received statins and 151 (5 percent) died within 30 days of an influenza test. Most of the deaths, however, occurred shortly after hospital discharge.

Previous research had suggested that statins might have a protective effect against influenza, providing anti-inflammatory and immunomodulatory effects that could help cut influenza-related deaths, but none of those studies limited inclusion to patients with laboratory-confirmed disease.

"To our knowledge, this is the first published observational study that evaluates the relationship between statin use among patients hospitalized with influenza," the researchers said.

"Future studies should examine underlying functional status, dose and duration of statin therapy, use of statins in younger age groups, and identification of the most effective class of statins."

They suggested that randomized controlled trials (RCTs) would allow for examination of such issues and assess whether long-term prophylaxis with statins would be a worthwhile strategy in reducing morbidity and mortality from influenza.

In an accompanying editorial, Dr. Edward Walsh, from the Infectious Diseases Division, Rochester General Hospital in New York, said the findings add significantly to the slowly accumulating evidence that statins may reduce the substantial annual morbidity and mortality from influenza. However, he echoed the researchers' call for definitive RCTs to accurately assess how statins may affect influenza. MT

Better BP control with bedtime drug dose

Rajesh Kumar

Taking at least one antihypertensive medication at bedtime improves control of blood pressure and reduces the risk for cardiovascular events in those with chronic kidney disease (CKD) and hypertension, a study has shown.

While the time of taking hypertension medications can affect circadian patterns of BP, the researchers sought to find out whether this impacts clinical outcomes. They randomly assigned 661 patients with CKD to either take all prescribed hypertension medications on waking up or to take at least one of them at bedtime. They then measured 48-hour ambulatory BP at baseline and 3 months after any adjustment in treatment or annually. [*J Am Soc Nephrol* 2011;22(12):2313-21]

After a median follow-up of 5.4 years, patients who took at least one BP-lowering medication at bedtime had an adjusted risk for total cardiovascular events that was approximately one-third that of patients who took all medications upon awakening (adjusted hazard ratio, HR 0.31; 95% CI 0.21 to 0.46; *P*<0.001), according to the research. Total cardiovascular events were a composite of death, myocardial infarction, angina pectoris, revascularization, heart failure, arterial occlusion of lower extremities, occlusion of the retinal artery and stroke.

Bedtime dosing also demonstrated a significant reduction in risk for cardiovascular death, myocardial infarction and stroke (adjusted HR 0.28; 95% CI 0.13-0.61; *P*<0.001).

The patients on bedtime medication also had a significantly lower mean sleep-time BP and a greater control of their ambulatory BP (56 percent versus 45 percent, *P*=0.003). Each 5 mmHg decrease in mean sleep-time systolic BP was associated with a 14 percent reduction in the risk for cardiovascular events during follow-up (*P*<0.001). MT

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DPP-4 inhibitor lowers hypoglycemia risk in fasting type 2 diabetics

Saras Ramiya

Patients with type 2 diabetes who fast during Ramadan and are on sitagliptin experience fewer hypoglycemic events than those on a sulfonylurea (SU), a study has shown.

The new prospective, multinational, randomized, naturalistic study published recently in the *International Journal of Clinical Practice* showed that at least one symptomatic hypoglycemic event was experienced twice as frequently in patients receiving treatment with a SU (glibenclamide, glimepiride or gliclazide) compared to those on sitagliptin (13.2 percent versus 6.7 percent). In addition, the relative risk of symptomatic hypoglycemia was significantly lower in patients on sitagliptin compared with those treated with a SU (Mantel-Haenszel relative risk ratio [95 percent CI]=0.51 [0.34, 0.75]; $P<0.001$). [*Int J Clin Pract* 2011;65(11):1132-40]

The overall risk of hypoglycemia (symptomatic and asymptomatic) was also significantly lower with sitagliptin (8.5 percent) compared to SU (17.9 percent) (Mantel-Haenszel relative risk ratio [95 percent CI] = 0.50 [0.36, 0.69]; $P<0.001$). The most commonly reported symptoms were headache, dizziness, sweating, tremor and hunger. Increased hypoglycemic events were also observed with SUs compared to sitagliptin in previous studies on type 2 diabetes patients. [*Diabetes Obes Metab* 2011;13(2):160-8, *Int J Clin Pract* 2010;64(5):562-76]

The new study assessed 1,066 patients in 43 clinical centers in Egypt, Israel, Jordan, Lebanon, Saudi Arabia and the United Arab Emirates. Eligible patients were Muslims with type 2 diabetes aged 18 and above who were treated with a stable dose of SU, with or without a stable dose of metformin, for at least 3 months before enrolment and had an HbA_{1c} of 10 percent or below at the screening visit.

Patients were randomized in a 1:1 ratio to switch to sitagliptin 100 mg once daily or remain on their prestudy SU treatment with or without metformin. Patients were asked to record hypoglycemic symptoms and complications on diary cards every day. Safety and tolerability were assessed by reviewing reported adverse events during the study. All adverse events were rated by the study site investigators for intensity ie, mild, moderate or severe, and relationship to the study drug.

The results are important for the millions of diabetes patients who fast during Ramadan. It is recommended that patients have a medical assessment 1 to 2 months before the start of Ramadan. Specific attention should be devoted to patients' overall wellbeing, and control of blood glucose, blood pressure and lipids. Specific medical advice must be provided to individual patients concerning the potential risks they must accept if they decide to fast. During this assessment, necessary changes in diet or medication regimen should be made so that the patient initiates fasting while on a stable and effective program. [*Diabetes Care* 2010;33(8):1895-902]

More than 50 million people with

diabetes worldwide – 80 percent of whom have type 2 diabetes – fast during Ramadan. [*Diabetes Care* 2004;27(10):2306-11]

Decreased food intake, increased exercise and certain diabetes medications are well-known risk factors for hypoglycemia in patients with type 2 diabetes. If left untreated, hypoglycemia can lead to serious medical problems, including loss of consciousness, convulsions and seizures, which require emergency treatment. [*Diabetes Care* 2004;27(10):2306-11, Diabetic hypoglycemia. Available at: ***www.mayoclinic.com/health/diabetic-hypoglycaemia/DS01166*** Accessed on 27 January] MT

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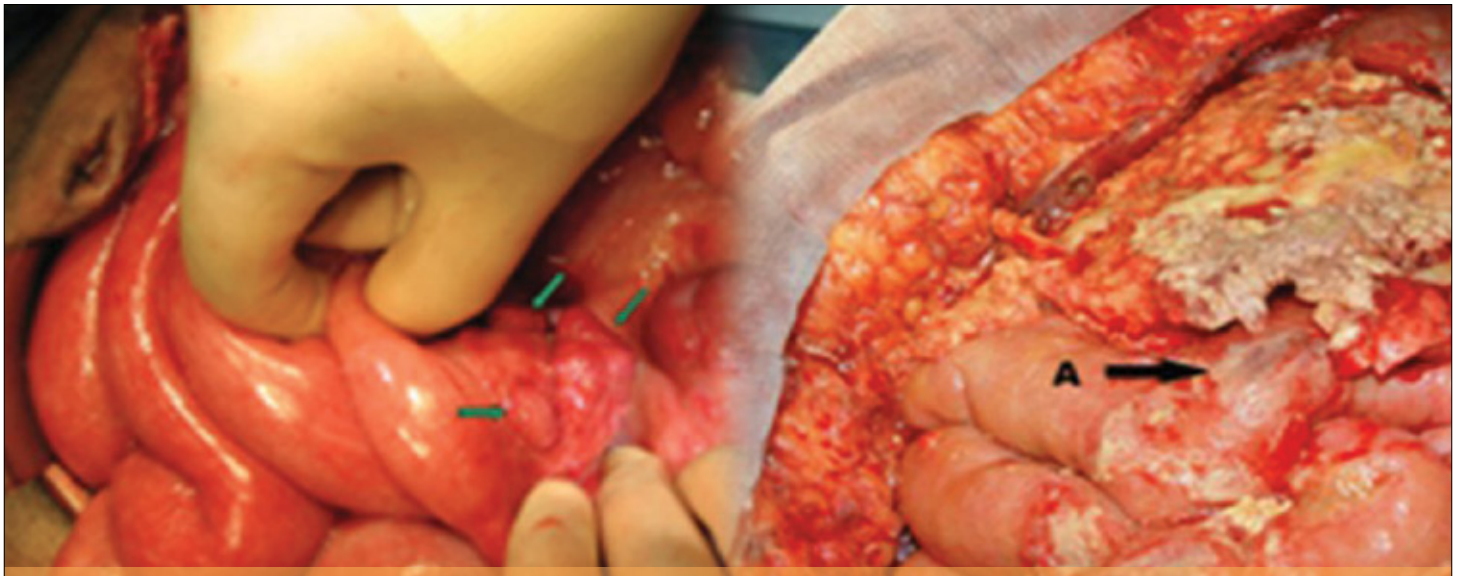

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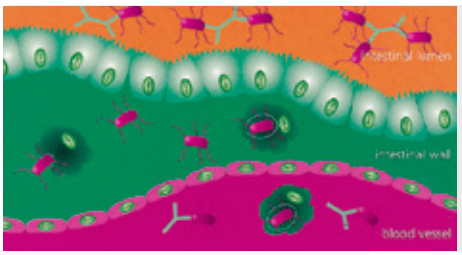

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Combined oral contraceptive pill helps ease painful periods

Elvira Manzano

Taking birth control pills may offer extra benefit for women who suffer from menstrual pain, according to a longitudinal, case-control study conducted in Sweden.

In the study, which involved 2,102 women aged 19 at baseline, those who received a combined oral contraceptive (COC) pill had significantly lower severity of dysmenorrhea at 5-year follow-up, with a mean 0.3-unit reduction on the verbal multidimensional scoring (VMS) system for rating pain compared with non-users ($P<0.0001$). [*Hum Reprod* 2012; DOI:10.1093/humrep/der417]

"[This] means that every third woman went one step down on the VMS scale, for instance from severe pain to moderate pain, which meant that they suffered less pain, improved walking ability with a decrease in the need for analgesics," said lead study author Dr. Ingela Lindh from Gothenburg University in Sweden.

COC use was also associated with a 9-mm reduction in pain as measured on a 10-cm visual analogs scale (VAS). [$P<0.0001$]

"We found that there was a significant difference in the severity of dysmenorrhea depending on whether or not the women used oral contraceptives," said Lindh, who is a nurse and a midwife.

Increasing age was also associated with decreased severity of symptoms (reduction of 0.1 units in VMS score, 5 mm in VAS score for 5 years, both $P<0.0001$). However,these effects were small compared to those seen with the pill. Childbirth was another factor that influenced severity of menstrual pain (with a reduction of 7 mm in VAS, $P<0.01$) but this was not fully analyzed as very few women had given birth between the ages of 19 and 24 in this study.

"In this … study, use of COC and increasing age, independent of each other, reduced the severity of dysmenorrhea," the authors said.

> "Information about the effects of COC use on painful periods should be included in contraceptive counseling

COCs have long been used off-label for dysmenorrhea but a Cochrane review found only small evidence for efficacy.

"It's good for women to know that there are some benefits of the pill," Lindh said. "Information about the effects of COC use on painful periods should be included in contraceptive counseling… Women who experience a beneficial effect other than contraception, such as reduction in dysmenorrhea, are more likely to continue with the pill."

She did however admit that the study should be confirmed by a placebo-controlled randomized trial to assess the efficacy of COCs as a primary outcome measure.

Fifty to 75 percent of young women suffer from dysmenorrhea. In the US, it has been estimated to account for 600 million lost working hours and a cost to the economy of around US$2 billion due to lost productivity a year. MT

Some contraceptives may exacerbate seizures

Radha Chitale

Hormonal contraceptives may result in more seizures in epileptic women compared with non-hormonal contraception methods, new research shows.

Data from 300 women aged 18-47 years who completed the Epilepsy Birth Control Registry survey showed that hormonal contraceptives, which can include contraceptive pills, vaginal rings, patches and injectables, increased seizure frequency by 17.8 percent, while non-hormonal contraceptives, which can include male and female condoms, intrauterine devices (IUDs), spermicides and diaphragms, increased seizure frequency by 2.9 percent ($P<0.0001$).

"Although contraception is an important consideration for women of reproductive age, there has been little investigation of contraceptive practices in women with epilepsy," the researchers said in a presentation during a meeting of the American Epilepsy Society, held recently in San Diego, California, US.

Seizure exacerbation occurred when hormonal contraceptives were used in conjunction with anti-epileptic drugs (AEDs), although the extent of exacerbation differed depending on the drug.

Valproate users experienced the most exacerbations if they also used hormonal contraceptives (43.6 percent), instead of non-hormonal contraceptives (7.7 percent) [$P=0.0007$].

The researchers observed a similar though less significant effect with carbamazepine, which was associated with more seizures when respondents were also taking hormonal contraceptives. The pattern was consistent with glucuronidated, enzyme-inducing AEDs and non-enzyme-inducing AEDs.

Hormonal contraceptive drugs were shown to increase the rate of seizures in a survey of 300 women with epilepsy.

The researchers theorized that elevated estrogen levels in the presence of valproate could lower the seizure threshold and so increase their frequency.

In the absence of AED use, hormonal contraceptives were associated with a 24.4 percent increased seizure frequency. In comparison, non-hormonal contraceptives increased seizure frequency by 6.67

percent (*P*=0.0463).

Among the survey cohort, 72 percent of the women reported using contraception in a parallel survey, most often an oral contraceptive (23 percent), male condom (23 percent, IUDs (12 percent) and withdrawal (10 percent).

Of a group of 178 high-risk women surveyed — classified because of their potential fertility and sexual activity — most were found to use highly effective contraceptive methods including hormonal contraceptives, IUDs, tubal ligations and vasectomy.

"Prospective investigations are needed to determine whether these findings represent important seizure safety issues or reporting biases," the researchers concluded. MT

Text reminders improve pill compliance

Rajesh Kumar

Daily text messages have been shown to markedly improve women's adherence to an oral contraceptive pill (OCP) regimen over a 6-month period.

In a randomized controlled trial, researchers assigned sexually active women <25 years of age, who sought contraception to prevent unwanted pregnancies, to either routine care (*N*=482) or routine care plus daily educational text messages for 180 days (*N*=480) and obtained continuation data on 683 of them (337 and 346, respectively). [*Obstet Gynecol* 2012; 119:14–20]

Routine care included counseling by staff at a family planning clinic and educational handouts detailing the use, effectiveness, benefits and risks of oral contraception. The endpoint was self-reported OCP continuation at 5 to 8 months.

At the 6-month follow-up, 64 percent of women receiving daily text messages were still using the pill, compared to 54 percent of the routine care group (*P*=0.005). Adherence was the highest among the group if the follow-up took place while the text messages were still being sent (75 percent, compared with 54 percent; *P*=0.003). The effect of the intervention on adherence became less obvious when the text messages stopped (60 percent in those who had previously received texts, compared with 54 percent in those who never did; *P*=0.16).

In analyses adjusted for age, race or ethnicity, age at first sexual experience, pregnancy history, and OCP experience, the study showed women receiving daily text reminders were more likely to continue taking the pill compared to others at 6 months (odds ratio 1.44, 95% CI 1.03–2.00).

"Unlike programs that seek to change the behavior of an individual woman to increase OCP continuation (eg, through enhanced counseling), the text messaging intervention used in the study instead adapts the health system to improve outcome," said the researchers.

"Such a strategy enables health care providers to enhance the contraceptive success of their patients simply by augmenting their clinical practice."

Young women are most likely to choose OCP as the preferred method for preventing unwanted pregnancies, but improper use and discontinuation are common.

Six-month OCP continuation rates in young women range anywhere from 12 to 58 percent and failure to establish a routine of taking the pill is cited as a common reason for OCP discontinuation.

Professor P.C. Wong, gynecologist and head of the National University Hospital Women's Centre in Singapore, said that under the circumstances, it is important for all involved in women's health to "chip in" with their efforts to improve adherence.

"…be it the gynecologist who writes the prescription, the pharmacist who dispenses it, or the family planning clinic that works for their welfare."

While text messages can indeed be useful, Wong said many tools are already available. For example, a pill reminder smart phone application recently launched by the pharmaceutical company, Bayer Healthcare. The app can send daily push reminders to those on the pill and includes features such as customizable reminder time, counting remaining pills, considering off days and 21 or 28 pill packs.

"Physicians also need to establish if the OCP is suitable for a particular woman. If someone is habitually forgetful and misses more than three pills in a month, it is important to recommend another method of contraception," said Wong.

Limitations of the study included researchers' reliance on participant self-report of ongoing OCP use, inadvertent variable time to follow up and lack of tailored text message content. MT

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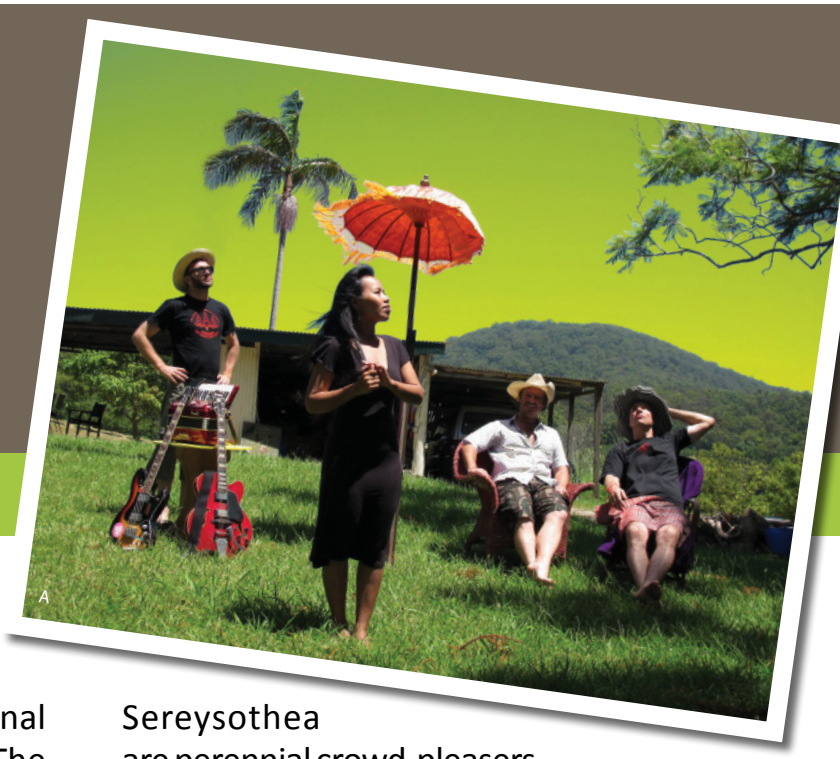


A

An exciting feature of Phnom Penh is its music scene. Throughout the week, numerous local and international live acts play hotspots across town. The music genres range from rock, to reggae and dub, to Celtic, jazz and bluegrass. Often, the more popular outfits draw sizeable crowds.

Of the foreign bands that have visited, the critically acclaimed Dengue Fever from Los Angeles, California, is perhaps the most well-liked. Two reasons for the band's popularity in this country are its Cambodian lead singer, Chhom Nimol, and the music it plays: a fusion of psychedelic rock and Cambodian pop. Its covers of 1960s Cambodian rock tunes by such musicians as Sinn Sisamouth, Pan Ron and Ros Sereysothea are perennial crowd-pleasers.

B

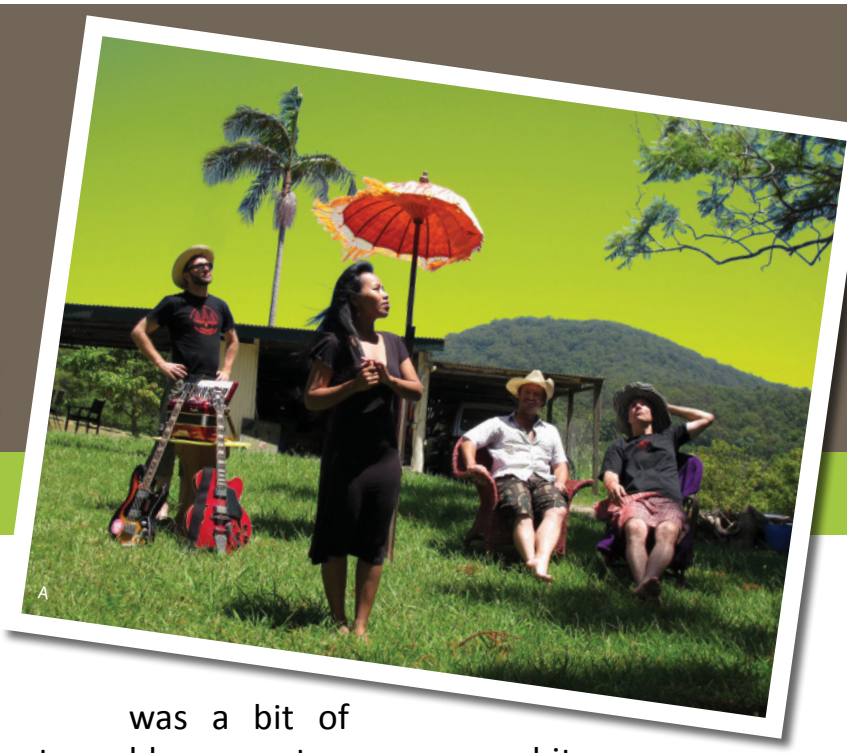
'60s and '70s Cambo Rock

Cambodia in the 1960s saw a new music scene emerge when local artists bridged western-style rock-and-roll with their own traditional Khmer compositions featuring unique melodies, hypnotic rhythms and lilting female vocals. The result was Cambo rock, a locally styled garage and psychedelic rock.

Among the famous musicians who developed this new sound were Sisamouth, a highly prolific singer-songwriter between the '50s and '70s, Pan, a highly versatile singer-songwriter who soared to popularity in the '60s, and Sereysothea, another popular, versatile singer best appreciated for her romantic ballads. Tragically, all three perished under the Khmer Rouge, which in 1975 began to wipe out all aspects of

A The Cambodian Space Project.
B Dub Addiction, live at Equinox Bar, from left to right: MC Curly, Professor Kinski, drummer Toma Willen, bassist Sebastien Adnot.

Live in Phnom Penh!



Audrey Wong *discovers new music in Cambodia.*

modernity and western influence, and the intellectual and creative classes, in a bid to reform Cambodian society.

The music from this golden age was not entirely lost, however, thanks to recordings and Cambodian rockers who survived the genocide.

Contemporary Sounds of Cambodia

Today's artists – locals and expatriates – have likewise embraced the fusion of Khmer and western tunes, creating exciting and unique sounds while echoing those of the past. Of these, The Cambodian Space Project and Dub Addiction are generating ripples of interest among alternative music lovers in the country and abroad.

The Cambodian Space Project

When Australian guitarist and keyboardist Julien Poulson first arrived in Cambodia in 2007, he was surprised to find no venue where musicians blended the cultures and bridged the gap between non-Khmer and Khmer tastes. "Around town there was a bit of blues, western covers, a bit of reggae, and if you ventured into Cambodian venues, a whole lot of karaoke or Khmer wedding bands playing a mix of old and new Cambodian songs," recalled Poulson. "Some of this was great, but I just felt it'd be fun if there was more of a crossover."

Acting on this observation, Poulson founded The Cambodian Space Project (CSP) in 2009. Fronting the band is Cambodian vocalist Srey Thy. "It started with the idea of sharing culture and creating some social awareness through an arts project," explained Poulson, "but it's quickly become a crazy Cambodian gypsy caravan, rolling across the dusty highways of Cambodia and onto all sorts of shows around the world."

The seven-piece outfit, composed of Cambodian, Australian and French musicians, reworks '60s and '70s Cambodian pop, weaving disparate elements to create

Live in Phnom Penh!

Audrey Wong *discovers new music in Cambodia.*

retro-inspired psychedelic rock. The nine songs on its recently released debut CD, *2011: A Space Odyssey*, combine two band originals with several tracks that were first recorded by Pan, Sisamouth and Sereysothea.

CSP has toured Australia, Hong Kong, China, Macau, the US and Europe. It performed for fans in Singapore on December 3 at Up to the Sky Festival, at Old School.

Dub Addiction

Founded in May 2011, Dub Addiction (DA) reinvents Cambodian music with a unique blend of classic ragga dub 'riddims' (a stripped-down track *sans* vocals that emphasizes the drum and bass parts) with Cambodian vocals by MC Curly and DJ Khla. This style is known as electronic ambient dub and dubstep.

"DA is Cambodia's first ragga (muffin) dub band, so what we're doing is a kind of pioneer work bringing new cool fusions and underground movements to the country's youth," explained Jan Mueller, a Cambodia-based German music producer of 15 years. Mueller goes by the moniker Professor Kinski and is responsible for DA's typical dub remix sounds.

Mueller and MC Curly – an orphaned, former street kid whose real name is Dang Kosal – actually started their partnership in 2007, making Khmer funky hip hop music with social content to educate poor Khmer youths.

"Cambodia is a country with an exciting musical past – old Khmer rock, Sisamouth, Sereysothea," said Mueller, who found only cheesy karaoke remained when he came in 2002. However, he was inspired by and used the beautiful vocals and melodies of old to create a new fusion groove filled with western funk, house, big beat and electro influences.

The seven-piece Dub Addiction, which includes French instrumentalists, plays local bars and clubs and at such events as the Kampot (Cambodia) River Music Festival and Friendship Festival (in

Live in Phnom Penh!

Audrey Wong *discovers new music in Cambodia.*

Battambang on December 10). It also plans to tour Thailand, China and Australia, as well as release its first album early this year and a 12-inch vinyl record on a Hong Kong-based label. The latter would be only the second vinyl release in Cambodia following the demise of the Khmer Rouge.

The Cambodian Spirit

Cambodia and its capital are experiencing a renaissance. The local music industry is blooming, brimming with collaborative spirit and new ideas.

"The Phnom Penh music scene is growing very fast. After years of just having expat classic rock cover bands, the variety of styles has increased a lot," said Mueller, who remixed and, in November, launched a CSP remix album, *Hummer H3*. "Because the present scene is still very small, you are immediately part of a cosy creative family. Not just the foreigners are developing their styles and skills, but also the Khmer music scene is growing."

There is no better time than now to experience, up close, the expansion of the country's vibrant, fresh and eclectic cultural landscape. "There is amazing music being made here in Cambodia. The most exciting thing is that it's buzzing, it's so far from the conventional music industry, there's no fashion police, no rules, no concern about what you do but the fact you're doing it is something that's celebrated," said Poulson. MT

Fan Pages

Dub Addiction
www.facebook.com/pages/Dub-Addiction/132503300159074

The Cambodian Space Project
www.facebook.com/pages/The-Cambodian-Space-Project/102538263132453

Dengue Fever
www.facebook.com/DengueFever

MALAYSIAN EVENTS

March

Coloproctology 2012
8/3 to 10/3; Kuching
Info : Secretariat
Tel : (03) 4023 4700 /
: 4025 4700
Fax : (03) 4023 8100
Email : secretariat@colorectalmy.org
www.colorectalmy.org

13th Malaysian Congress and Exhibition on Allergy and Immunology
9/3 to 11/3; Kuala Lumpur
Info : MSAI Secretariat
Tel : (03) 4041 0092 /
: 4041 6336
Fax : (03) 4042 6970 /
: 404207919
Email : dr_harnam@hotmail.com
www.allergymsai.org

15th Ottawa Conference
9/3 to 15/3; Kuala Lumpur
Info : Secretariat
Tel : (03) 4252 9100
Fax : (03) 4257 1133
Email : ottawa2012@aosconventions.com
www.ottawaconference.org

1st World Congress on Healthy Ageing 2012
19/3 to 22/3; Kuala Lumpur
Info : Secretariat
Tel : (03) 2070 5600
Fax : (03) 2072 5600
Email : wcha@healthyageing.org
www.healthyageingcongress.org

8th National Symposium on Adolescent Health (8th NSOAH)
23/3 to 25/3; Melaka
Info : Dr. N. Thiyagar /
Dr. Mymoon Alias
Tel : (03) 20954784
Fax : (03) 20954784
Email : mymoon_kkm@hotmail.com / thiyagarsp@yahoo.com
www.mma.org.my

National TB Symposium 2012
24/3 to 25/3; Kuala Lumpur
Info : Dr. Liza Ahmad Fisal / Dr. Nurhayati Mohd Marzuki / Dr. Zamzurina
Tel : (03) 4023 2966
Fax : (03) 4024 4063
Email : lizafaisal77@yahoo.com / nurmm25@gmail.com / zamzurina76@yahoo.com.my
www.nationaltbsymposium.webs.com

Endoscopy 2012
30/3 to 1/4; Kuala Lumpur
Info : MSGH Secretariat
Tel : (03) 4024 4700 /
: 4025 4700 /
: 4025 3700
Fax : (03) 40230 8100
Email : secretariat@msgh.org.my
www.msgh.org.my

April

Nutrition and Dietetics Professional Competency Symposium
6/4 to 7/4; Kuala Lumpur
Info : Ms Grace Chong
Tel : (03) 2162 0566
Fax : (03) 2161 6560
Email : ndpcs@console.com.my

19th Annual Congress of the Perinatal Society of Malaysia
12/4 to 15/4; Petaling Jaya
Info : Secretariat
Tel : (03) 2615 5555 /
: 2615 6889
Fax : (03) 2694 8187
Email : perinatalsocietymalaysia@yahoo.com
www.perinatal-malaysia.org

Annual Scientific Meeting of the Malaysian Society of Anaesthesiologists & College of Anaesthesiologists, AMM 2012
19/4 to 22/4; Kuantan
Info : Secretariat
Tel : (03) 4023 4700 /
: 4025 4700
Fax : (03) 4023 8100
Email : secretariat@msa.asm.org.my
www.msa.asm.org.my

6th General Assembly of Asia Pacific Organization for Cancer Prevention (APOCP 2012)
26/4 to 29/4; Kuching
Info : Professor Yip Cheng Har
Tel : (03) 7949 2440
Fax : (03) 7958 6360
Email : yipch@um.edu.my/ yipch@ummc.edu.my
www.apocp.net

9th Malaysian Conference and Exhibition on Anti-Aging, Aesthetic, and Regenerative Medicine & 2nd International Congress on Anti-Aging, Aesthetic, and Regenerative Medicine
27/4 to 29/4; Kuala Lumpur
Info : Secretariat
Tel : (03) 4041 0092 /
: 4041 6336
Fax : (03) 4042 6970 /
:4042 7919
Email : info@saamm.com
www.saaarmm.org

WFAS 2012 Malaysia: Acupuncture, Orthopedic, Cancer and Education Symposium
30/4 to 2/5; Kuching
Info : Professor Liao Chunhua
Tel : (03) 5510 6868 ext 683
Fax : (03) 9173 9369
Email : chliao@msu.edu.my
www.msu.edu.my

May

Private Medical Practitioners' Association of Selangor and Kuala Lumpur 52nd AGM & Annual Scientific Meeting
5/5 to 6/5; Kuala Lumpur
Info : Secretariat
Tel : (03) 4023 4700 /
: 4025 4700
Fax : (03) 4023 8100
Email : acadmed@po.jaring.my
www.pmpaskl.org

AGM/Annual Scientific Meeting of the College of Surgeons, Academy of Medicine of Malaysia
25/5 to 27/5; Kuantan
Info : Secretariat
Tel : (03) 4023 4700/
: 4025 4700
Fax : (03) 4023 8100
Email : acadmed@po.jaring.my
www.acadmed.org.my

June

Royal College of Obstetricians and Gynaecologists (RCOG) 10th International Scientific Meeting 2012
5/6 to 8/6; Kuching
Info : Dr. Gunasegaran Rajan
Tel : (03) 6201 3009
Fax : (03) 6201 7009
Email : ogsm@myjaring.net
www.rcog2012.com

4th Parenteral & Enteral Nutrition Society of Malaysia (PENSMA) 2012
14/6 to 16/6; Penang
Info : Secretariat
Tel : (03) 4023 4700 / 4025 4700 / : 4025 3700
Fax : (03) 4023 8100
Email : secretariat@pensma.org
www.PENSMA.org

42nd Malaysian Orthopaedic Association Annual General Meeting & Annual Scientific Meeting
14/6 to 18/6; Kuantan
Info : Secretariat
Tel : (016) 203 6018
Fax : (03) 6207 6795
Email : moa2012@bloomcomm.com
www.moa-home.com

Inaugural Asean Sleep Congress & 4th Malaysian International ORL-HNS Congress
28/6 to 30/6; Kuala Lumpur
Info : Secretariat
Tel : (03) 2233 8931 / 2233 8932
Fax : (03) 2233 8899
Email : aseansleep2012@gmail.com
www.aseansleepcongress.com

Annual Scientific Meeting of the Malaysian Society of Gastroenterology and Hepatology (GUT 2012)
29/6 to 1/7; Malacca
Info : Secretariat
Tel : (03) 4023 4700 / : 4025 4700 / : 4025 3700
Fax : (03) 4023 8100
Email : secretariat@msgh.org.my
www.msgh.org.my

July

Malaysian Thoracic Society Annual Congress 2012
6/7 to 8/7; Kuching
Info : Secretariat
Tel : (03) 4023 4700 / 4025 4700
Fax : (03) 4023 8100
Email : secretariat@mts.org.my
www.mts.org.my

1st Asia Pacific Conference on Clinical Epidemiology and Evidence Based Medicine
6/7 to 8/7; Kuala Lumpur
Info : Ms. Devi Peramalah
Tel : (03) 7967 3793/ : 7967 3797
Fax : (03) 7967 4975
Email : apceebm1@ummc.edu.my
www.apceebm.um.edu.my

13th MSR-SSR Workshop in Rheumatology 2012
6/7 to 8/7; Penang
Info : Secretariat
Email : secretariat@msr.my
www.msr.org.my

16th Malaysia Family Medicine Scientific Conference
13/7 to 15/7; Malacca
Info : Dr. Junaidah Abd Rahman
Tel : (06) 3842533
www.conference2012.fms-malaysia.org

INTERNATIONAL EVENTS

February

20th Regional Conference of Dermatology
20/2 to 23/2; Manila, Philippines
Info : Philippine Dermatological Society
Email : rcd2012@pds.org.ph
http://www.pds.org.ph/

2012 Annual Meeting of the American College of Psychiatrists
22/2 to 26/2; Florida, US
Info : American College of Psychiatrists
www.acpsych.org/meetings-and-news/annual-meeting

International Congress of Cardiology
24/2 to 26/2; Hong Kong
Info : Global Event Management
Email : icc@globalevent.hk
www.icc-hongkong.com

March

ERC 2012: European Congress of Radiology
1/3 to 5/3; Vienna, Austria
Info : European Society of Radiology
Email : registration@myESR.org
www.myesr.org/cms/website.php?id=/en/ecr_2012.htm

2012 Annual Meeting of the Academy of Allergy, Asthma & Immunology
2/3 to 6/3; Orlando, Florida, US
Info : Secretariat
Email : annualmeeting@aaaai.org
www.aaaai.org

2012 Highlights of ASH® in Asia
3/3 to 4/3; Singapore
Info : ASH Customer Relations Department
Email :customerservice@hematology.org
www.hematology.org/Meetings/Highlights/6836.aspx

13th Pan American Congress of Neurology
5/3 to 8/3; La Paz, Bolivia
Info : World Federation of Neurology
Email : pcn2012@kenes.com
www2kenes.com/pcn2012/pages/Home.aspx

20th Annual Meeting of the Asian Society for Cardiothoracic Surgery
8/3 to 11/3; Bali, Indonesia
Info : Asian Society for Cardiothoracic Surgery
Email : info@ascvtsbali2012.org
www.ascvtbali2012.org

61st American College of Cardiology (ACC) Annual Scientific Session

24/3 to 27/3; Chicago, Illinois, US

Info : Secretariat
Email : accregistration@jspargo.com
www.accscientificsession.org/

15th World Congress of Anaesthesiologists

25/3 to 30/3; Buenos Aires, Argentina

Info : WF SA World Congress of Anaesthesiologists
Email : wfsahq@anaesthesiologists.org
www.wca2012.com

9th European Congress on Menopause

28/3 to 31/3; Athens, Greece

Info : European Menopause and Andropause Society
Email : emas@kenes.com
www.2.kenes.com/emas/pages/default/aspx

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